B77

SPECIAL-VERSIONS

SCHALTUNGSSAMMLUNG SET OF SCHEMATICS
RECUEIL DE SCHÉMAS

INHALTSVERZEICHNIS

CONTENTS

REPERTOIRE

Änderungen vorbehalten | Subject to change | Sous réserve de modification

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CH-8105 Regensdorf-Zürich

DIASTEUERUNG 1.177.270

Mit einem eingebauten Spezial-Tonkopf und angeschlossener Laufwerk-Fernbedienung, ermöglicht diese Schaltung Steuerimpulse für den Bildwechsel bei handelsüblichen Dia-Projektoren auf Band zu bringen.

Eine Anpassung der Steuerschaltung an diverse Projektor-Fabrikate ist gewährleistet, indem über einen galvanisch getrennten Relaiskontakt geschaltet wird.

Über die beiden Steuertasten REC-SLIDE und SET-SLIDE, werden die folgenden Betriebszustände gewählt:

— Wiedergabe von Schaltimpulsen

— Sperren der Wiedergabe von bereits aufgezeichneten Schaltimpulsen (wichtig bei bespielten 4-Spur Bändern)

— Löschen sowie Setzen von (neuen) Impulsen

Es werden 1 kHz Sinussignale aufgezeichnet. Die Löschung erfolgt mit Gleichstrom.

Die genaue Funktion der Steuertasten ist aus der Tabelle ersichtlich. Ein Ausserbetriebsetzen des Relais ohne angeschlossene Fernbedienung ist mittels eines beschalteten Blindsteckers möglich.

Slide synchronizing electronics 1.177.270

A special magnetic head in conjunction with the slide synchronizing electronics makes it possible to record control impulses on tape. Upon playback, these impulses will effect a picture change in any commercially available projector, when connected to the B77 recorder. This system is operational only in conjunction with the REVOX B77 remote control device.

Reliable operation with different makes of projectors is ensured by the fact that control of the slide advance mechanism is effected by separate relay contacts.

By means of the buttons REC-SLIDE and SET-SLIDE on the remote control device, the following operating conditions can be selected:

— Reproduction of control (switching) impulses.

— Disabling of the synchronizing circuit so as not to respond to signals scanned by the impulse head (important when playing fully recorded quarter track tapes).

— Erasure and recording of (new) control impulses.

The exact function of each control button can be seen from the table. To disable the relay without a remote control device connected to the recorder, a suitably wired dummy plug has to be inserted in the remote receptacle.

Synchronisateur de diapositives 1.177.270

Ce circuit monté dans un B77 équipé d'une tête pilote et raccordé à la commande à distance, permet la commande par la bande d'un projecteur de diapositives.

La commande par les contacts du relais, isolés galvaniquement du circuit, s'adapte à n'importe quel type de projecteur.

Les deux touches de commande REC-SLIDE et SET-SLIDE permettent les fonctions suivantes:

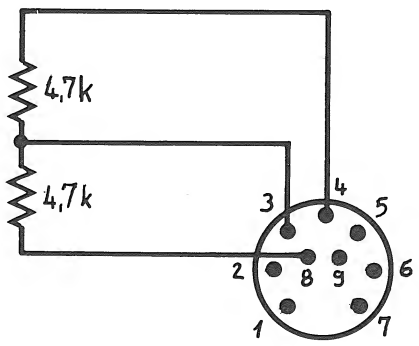
— Lecture des impulsions de commande

— Blocage de la lecture des impulsions de commande (important pour les appareils 4 pistes).

— Effacement ainsi qu'enregistrement des (nouvelles) impulsions.

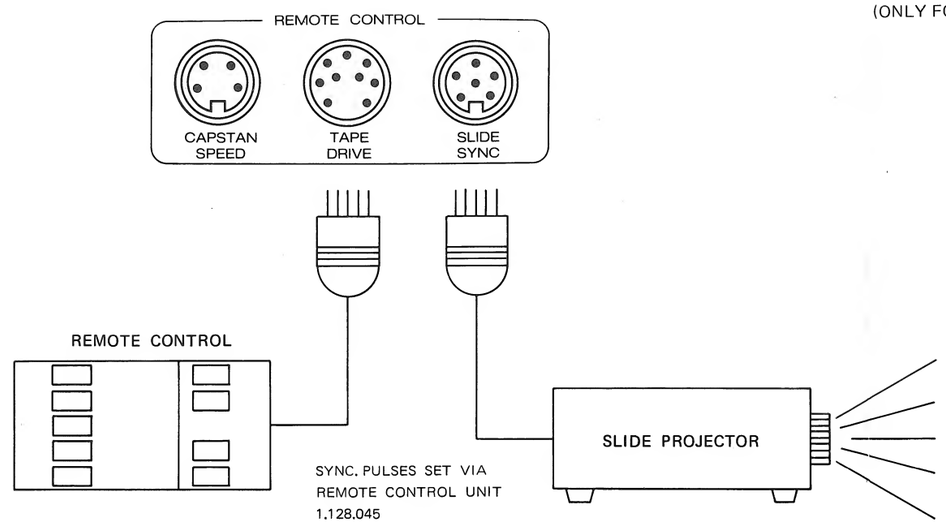
Ces impulsions sont constituées par des trains d'un signal sinusoïdal de 1 kHz. L'effacement s'effectue par courant continu.

Les fonctions exactes des touches de commande sont données par la tabelle. La mise hors fonction du relais sans l'aide de la commande à distance, peut se faire avec une fiche borne pontée.



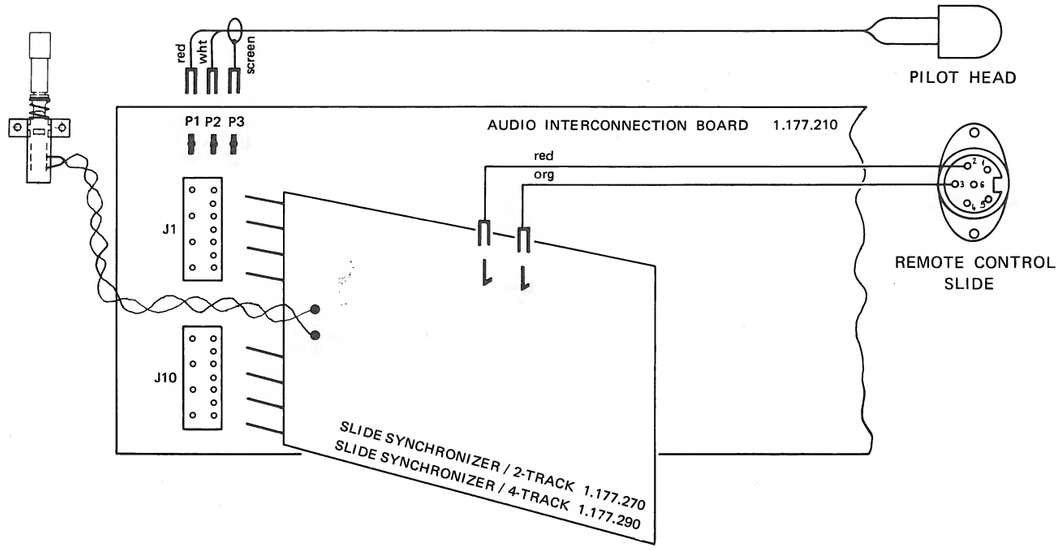
A

STANDARD VERSION



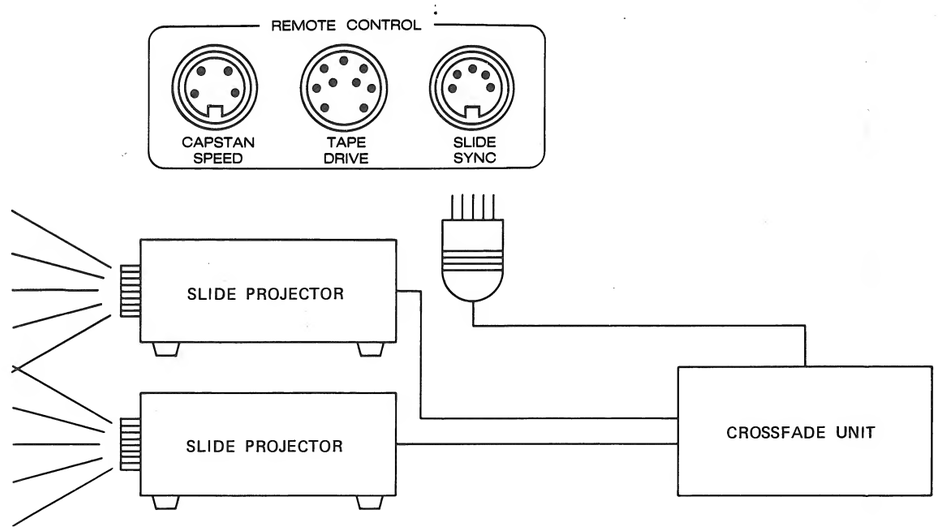
DIA PILOT MUTING SWITCH
(ONLY FOR 4-TRACK VERSIONS)

PILOT HEAD 2-TRACK 1.116.082-01
PILOT HEAD 4-TRACK 1.116.083-01

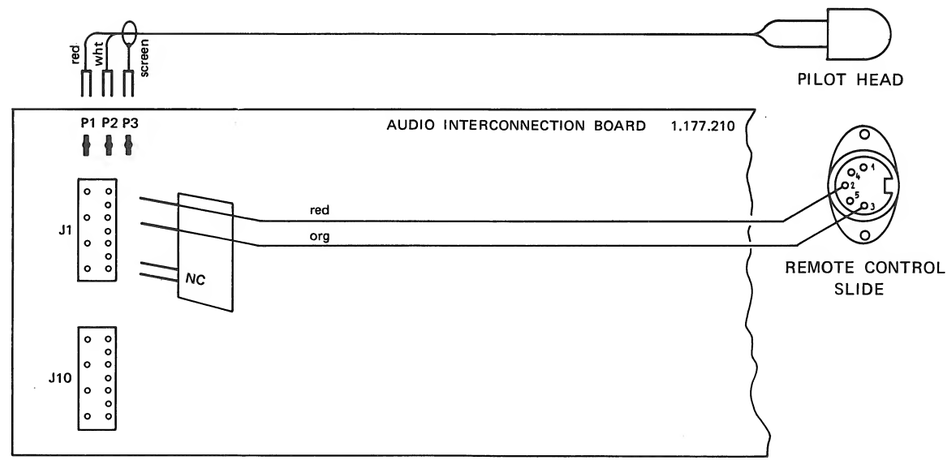


B

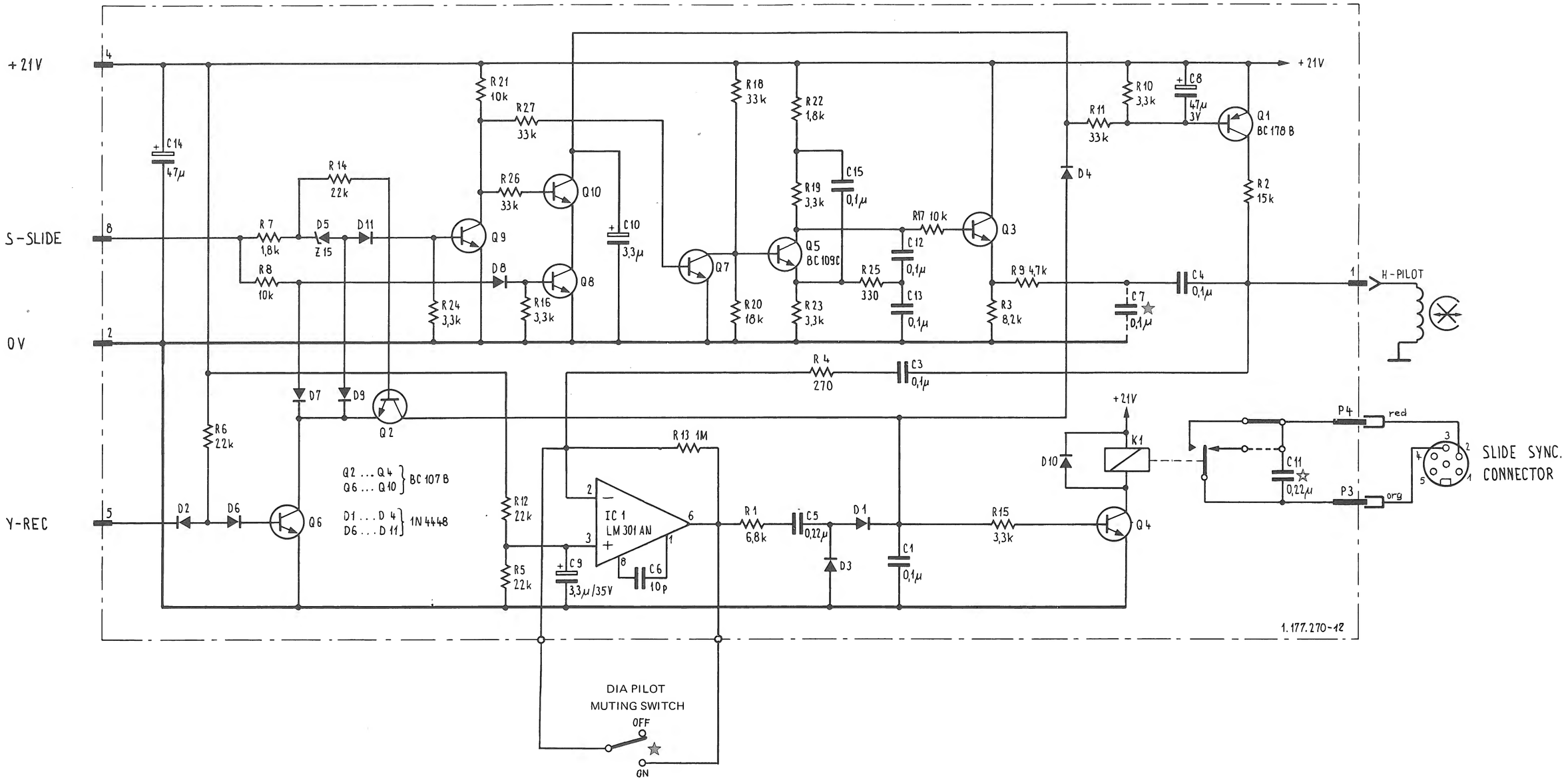
WIRING FOR CROSSFADE UNITS



PILOT HEAD 2-TRACK 1.116.082-01
PILOT HEAD 4-TRACK 1.116.083-01



STUDER REVOX	B77 DIA
INSTALLATION OF SLIDE SYNC. KIT	
	ED2 09.79



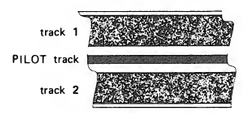
Schaltbefehl	Funktion
PLAY	Wiedergabe Steuerimpulse
PLAY + SLIDE-REC	Wiedergabe Steuerimpulse gesperrt
PLAY + REC + Vorwahl	normale NF-Aufnahme
PLAY + REC + SLIDE-REC	Löschen der Steuerimpulse
PLAY + REC + SLIDE-REC + SET-SLIDE	solange SET gedrückt, wird Steuerimpuls gesetzt (kurz und lang möglich).

Effected switching	Resulting function
PLAY	Reproduction of control impulses
PLAY + SLIDE-REC	Reproduction of control impulses disabled
PLAY + REC + preselected	Normal audio recording
PLAY + REC + SLIDE-REC	Erasure of control impulses
PLAY + REC + SLIDE-REC + SET-SLIDE	Recording of a new impulse as long as the button SET is kept depressed.

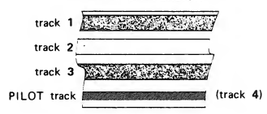
Commande	Fonction
PLAY	Lecture des impulsions
PLAY + SLIDE-REC	Blocage de la lecture des impulsions
PLAY + REC + présélecteur	Enregistrement BF normal
PLAY + REC + SLIDE-REC	Effacement des impulsions de commande
PLAY + REC + SLIDE-REC + SLIDE-REC	Enregistrement des impulsions de commande aussi longtemps que la touche SET reste enfoncée.

★ FOR 4-TRACK VERSION ONLY (KIT 74504)
☆ REMOVE C11 FOR USE WITH ROLLEI P3800

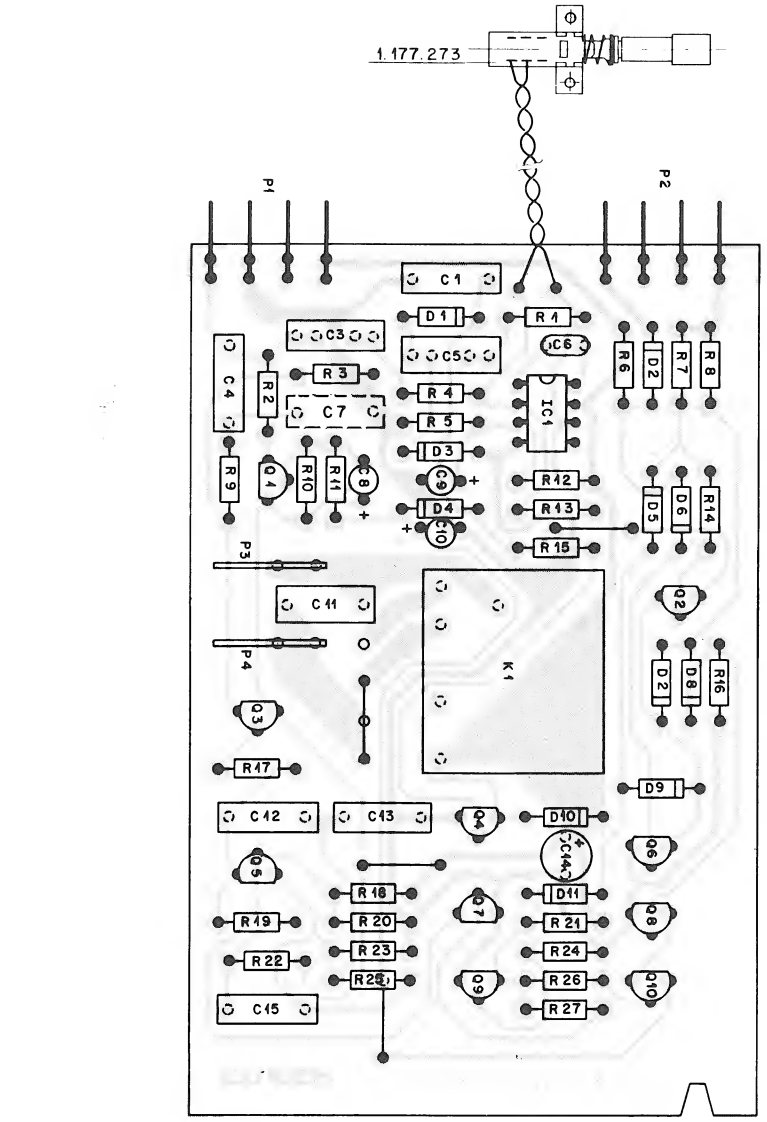
1.177.270
2-TRACK VERSION



1.177.290
4-TRACK VERSION



STUDER REVOX	B77 DIA
SLIDE SYNCHRONIZER	
1.177.270/290	ED2 09.79


1.177.273
P1
P2
P3
P4
C1
C3
C5
C7
C4
C11
C12
C13
C15
C14
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
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IC6
K1
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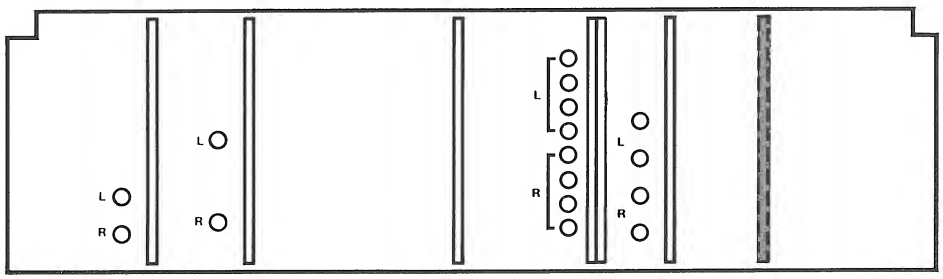
Q5
Q6
Q7
Q8
Q9
Q10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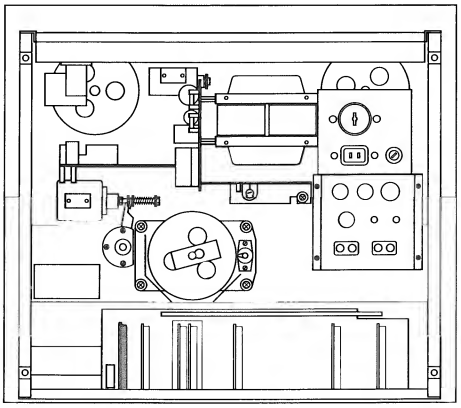


POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT MFR
C 01	59.31.6104	0,1 U	10% 100V MPETP	
C 03	59.31.6104	0,1 U	10% 100V MPETP	
C 04	59.31.6104	0,1 U	10% 100V MPETP	
C 05	59.31.1224	0,22 U	20% 100V MPETP	
C 06	59.32.0100	10 P	20% 50V CER	
C 07	59.31.6104	0,1 U	10% 100V MPETP	
C 08	59.30.1470	47 U	-20% 3V TA	
C 09	59.30.6339	3,3 U	-20% 35V TA	
C 10	59.30.6339	3,3 U		
C 11	59.31.1224	0,22 U	20% 100V MPETP	
C 12	59.31.6104	0,1 U	10%	
C 13	59.31.6104	0,1 U		
C 14	59.22.5470	47 U	-10% 25V EL	
C 15	59.31.6104	0,1 U	10% 100V MPETP	
D 01	50.04.0109	1N 4448		any
D 02	50.04.0109	1N 4448		
D 03	50.04.0109	1N 4448		
D 04	50.04.0109	1N 4448		
D 05	50.04.0119	Z 15	15V 5% 400mW	
D 06	50.04.0109	1N 4448		
D 07	50.04.0109	1N 4448		
D 08	50.04.0109	1N 4448		
D 09	50.04.0109	1N 4448		
D 10	50.04.0109	1N 4448		
D 11	50.04.0109	1N 4448		
IC 1	50.05.0257	LM 301		TI,N
K 01	56.99.0116	1 x U	24V	S, O
P 01	54.01.0470	4-Pole	PIN-Strip AMP	
P 02	54.01.0470	4-Pole	PIN-Strip AMP	
P 03	54.02.0328		Flat Pin 0,8 AMP	
P 04	54.02.0328		Flat Pin 0,8 AMP	
Q 01	50.03.0318	BC178B	PNP	any
Q 02	50.03.0436	BC107B	NPN	
Q 03	50.03.0436	BC107B	NPN	
Q 04	50.03.0436	BC107B	NPN	
Q 05	50.03.0439	BC109C	NPN	
Q 06	50.03.0436	BC107B	NPN	
Q 07	50.03.0436	BC107B	NPN	
Q 08	50.03.0436	BC107B	NPN	
Q 09	50.03.0436	BC107B	NPN	
Q 10	50.03.0436	BC107B	NPN	

TI = Texas Instr.
N = National
S = Siemens
O = Omron

MPETP = metallized polyester
TA = tantalum
EL = electrolytic
CER = ceramic

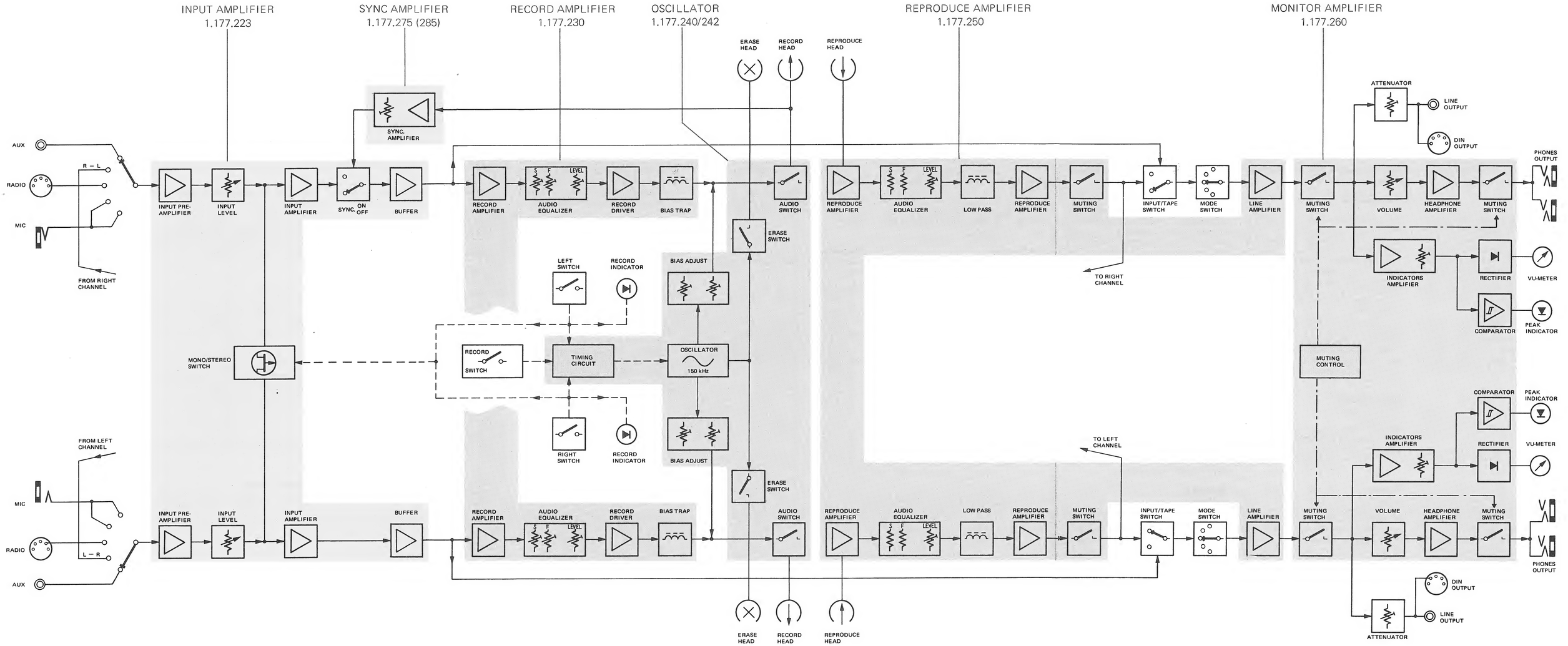
IND	DATE	NAME
④ ③ ② ① ○	8.6.78	Lu./gv lu.

POS NO	PART NO	VALUE	SPECIFICATIONS EQUIVALENT MFR
R 01	57.41.4682	6,8 k	5% .25W CF
R 02	57.41.4153	15 k	
R 03	57.41.4822	8,2 k	
R 04	57.41.4271	270	
R 05	57.41.4223	22 k	
R 06	57.41.4223	22 k	
R 07	57.41.4182	1,8 k	
R 08	57.41.4103	10 k	
R 09	57.41.4472	4,7 k	
R 10	57.41.4332	3,3 k	
R 11	57.41.4333	33 k	
R 12	57.41.4223	22 k	
R 13	57.41.4105	1 M	
R 14	57.41.4223	22 k	
R 15	57.41.4332	3,3 k	
R 16	57.41.4332	3,3 k	
R 17	57.41.4103	10 k	
R 18	57.41.4333	33 k	
R 19	57.41.4332	3,3 k	
R 20	57.41.4183	18 k	
R 21	57.41.4103	10 k	
R 22	57.41.4182	1,8 k	
R 23	57.41.4332	3,3 k	
R 24	57.41.4332	3,3 k	
R 25	57.41.4331	330	
R 26	57.41.4333	33 k	
R 27	57.41.4333	33 k	

CF = Carbon Film

IND	DATE	NAME
④ ③ ② ① ○	8.6.78	Lu./gv

STUDER	SLIDE SYNCHRONIZER 2/4 TRACK	1.177.270/290	PAGE 2 of 2



STUDER REVOX	B77 SYNC
AUDIO BLOCK DIAGRAM B77 SYNC	
	ED1 09.79

Schaltungsbeschreibung zu Tonbandgerät REVOX B77 SYNC

Funktionsbeschrieb

Der linke Kanal (obere Spur des Aufnahmekopfes) wird auf einen speziell dafür entzerrten Wiedergabeverstärker geführt und in den Signalweg "vor Band" geschaltet. Eine zuvor auf dem linken Kanal gemachte Aufnahme kann beim Abspielen (Monitor-Schalter auf Position INPUT) ab dem Aufnahmekopf wiedergegeben werden. Der linke Kanal kann auf die gleiche Weise abgehört werden, auch wenn das Gerät auf Aufnahme geschaltet ist.

Dadurch ist es möglich, den rechten Kanal ohne zeitliche Verschiebung zwischen Aufnahme- und Wiedergabekopf zu bespielen. Eine Verriegelungslogik verhindert, dass der linke Kanal nicht versehentlich auf Aufnahme geschaltet wird (LED für Aufnahmevorwahl leuchtet nicht).

Spezielle Baugruppen

SYNC-Eingangsverstärker 1.177.223
SYNC-Verstärker 1.177.275
Betriebsartenwahlschalter (hinter der Abdeckklappe)
Das Umschalten auf SYNC-Betrieb kann durch Drücken der Taste "SLIDE-REC" auch über die Fernbedienung erfolgen.

Elektronik

1.177.223
Zusätzlich zu der Standardversion wird der Signalpfad des linken Kanals vom Eingang her unterbrochen und über ein Relais geführt. Dadurch wird eine schaltbare Einspeisung des vom Aufnahmekopf kommenden und verstärkten Signals möglich. Die Auskoppelung auf die Sammelschiene erfolgt mittels IC 2.

1.177.275
Die Verbindung (Kabelbund, gesteckt) zwischen Aufnahmekopf und Oszillator wird über diesen Print geführt. Dadurch ist ein schaltbarer Zugriff zum Aufnahmekopf möglich. Der linke Kanal (obere Spur) des Aufnahmekopfes wird über K1 auf ein HF-Sperrfilter mit nachfolgendem geschwindigkeitsabhängig-entzerrten Verstärker geschaltet.

Circuit description for REVOX B77 SYNC tape recorder

Functional details

The signal of track 1 (upper section of the recording head), which corresponds to the left channel, is fed to a separate, especially equalized playback amplifier from where it enters the "INPUT" signal path. A recording existing on track 1 can thus be replayed through the recording head (monitor selector in position INPUT). Headphone monitoring of track 1 in this manner is possible even with the machine in the recording mode.

This permits a second recording to be laid down on track 2, yet without being displaced by the distance between the playback and recording heads. Accidental recording on track 1 is not possible when this operating mode is selected (LED for record preselection will not become luminous).

Special components

SYNC input amplifier 1.177.223
SYNC amplifier 1.177.275
Operating mode selector (behind front flap)
Remote switching to SYNC operation can be effected also via the button "SLIDE-REC" on the B77 remote control device 128.040.

Electronics

1.177.223
Unlike in the standard version, the input signal path of the left channel passes via the changeover contacts of a relay. In this manner, the amplified signal as picked up by the recording head may be fed into the monitor circuit. Coupling to the signal bus is effected through IC 2.

1.177.275
The plugable connection from the oscillator to the recording head is routed via this printed circuit board, thereby providing switchable access to the recording head. Track 1, which corresponds to the upper section of the recording head, can thus be connected via K1 to a bias trap, which is followed by an amplifier with tape speed dependent equalization.

Explications des circuits pour le magnétophone REVOX B77 SYNC

Description des fonctions

Le canal gauche (piste supérieure de la tête d'enregistrement) est amené par un amplificateur correcteur de lecture spéciale à la ligne audio avant bande. Un enregistrement effectué sur le canal gauche peut être ainsi écouté (commutateur TAPE/INPUT en position INPUT) par la tête d'enregistrement. Le canal gauche peut également être lu, même lorsque l'appareil est commuté en enregistrement.

Cela permet d'effectuer un enregistrement sur le canal droit sans décalage dans le temps entre la tête d'enregistrement et la tête de lecture. En enregistrement un verrouillage électronique évite tout risque d'enregistrement du canal gauche (la LED du présélecteur d'enregistrement ne s'allume pas).

Sous-ensemble spéciaux

Amplificateur d'entrée "SYNC" 1.177.223
Amplificateur "SYNC" 1.177.275
Commutateur de mise en service (sous le cache escamotable)
La commutation de fonction SYNC se fait également en appuyant sur la touche SLIDE-REC de la commande à distance.

Electronique

1.177.223
Contrairement à la version standard la ligne audio d'entrée du canal gauche passe au travers d'un relais. Ceci permet de commuter et d'amplifier le signal provenant de la tête d'enregistrement. L'accouplement à la barre collective audio se fait avec IC 2.

1.177.275
Ce circuit sert de liaison entre la tête d'enregistrement et l'oscillateur. Il permet d'accéder par commutation à la tête d'enregistrement. Le canal gauche (piste supérieure) de la tête d'enregistrement est amené par K1 à un filtre de réjection HF, puis à l'amplificateur correcteur d'adaption à la vitesse de défilement.

Über einen verzögerten FET-Schalter gelangt das Signal auf den Eingangsverstärker 1.177.223.

Um den Signalpegel bei SYNC-Betrieb dem Wiedergabepegel anzupassen, kann die Verstärkung im Entzerrer mit R22 verändert werden.

SYNC-Montage
(Ersichtlich aus Schaltbild "Audio Interconnection Board")

SYNC-Einstellung
– Linker Kanal, NF-Eingang mit 1 kHz 0,775 V 0 dB an Anschluss AUX-INPUT einspeisen.
– Gerät auf Aufnahme starten und ca. eine Minute aufnehmen.
– SYNC-Betrieb einstellen, Monitorschalter abwechslungsweise auf TAPE und INPUT schalten und mit R22 (SYNC-Amplifier 1.177.275) auf kleinsten Pegelsprung einstellen.

Through a time delayed FET switch, the signal reaches the input amplifier 1.177.223.

Gain adjustments to match the signal level for SYNC operation with that of normal playback are possible by means of R22 in the equalizer.

SYNC assembly
(for details check circuit diagram "audio interconnection board")

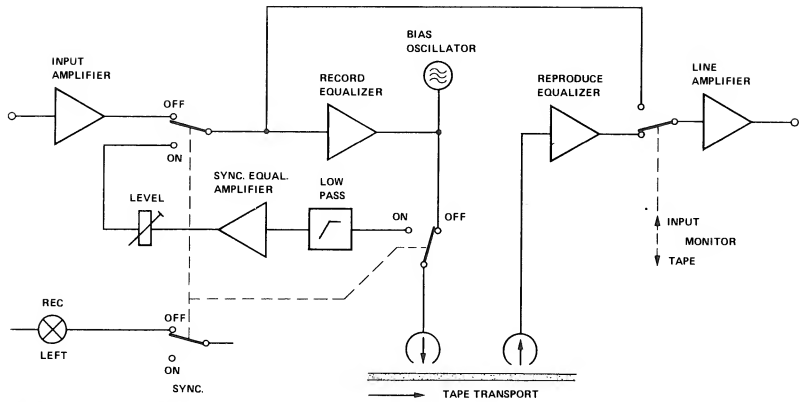
SYNC calibration
– Feed 1 kHz/0.775 V (0 VU) into the left channel AUX input.
– Start the machine in the recording mode and record for 1 minute approximately.
– Select SYNC operation. Alternate the monitor selector between TAPE and INPUT and adjust R22 (in the SYNC amplifier 1.177.275) for equal levels.

Un circuit FET retardé amène ce signal à l'amplificateur d'entrée 1.177.223.

Le potentiomètre R22 permet, en fonction SYNC, d'adapter le niveau du signal de lecture.

Montage SYNC
(Voir le schéma "Audio Interconnection Board")

Réglage SYNC
– Injectez à l'entrée auxiliaire AUX-INPUT du canal gauche un signal de 1 kHz à 0,775 V, 0 dB
– Démarrez l'appareil en enregistrement pour une durée d'environs 1 minute
– Enclenchez la fonction SYNC, puis à l'aide du commutateur TAPE/INPUT, comparez les niveaux et corrigez éventuellement à l'aide de R22 du circuit amplificateur SYNC 1.177.275.



FUNCTION DIAGRAM B77 SYNC

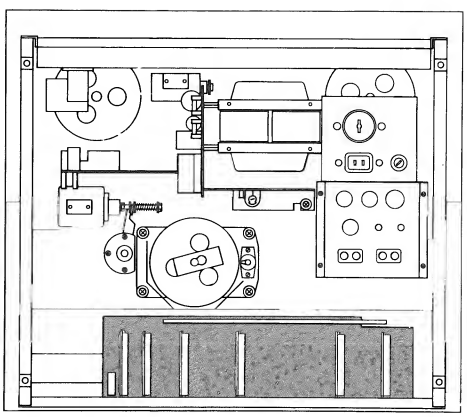
MONITOR-und SYNC-Schalter Positionen	**MONITOR and SYNC switch positions**		**Positions du commutateur MONITOR et SYNC**
Linker Kanal Left channel Canal gauche	Monitor Schalter Monitor switch Commutateur Monitor	Sync. Schalter Sync. switch Commutateur Sync.	Rechter Kanal Right channel Canal droit
Wiedergabe-Signal vom Wiedergabekopf Reproduce signal from reproduce head Signal enregistré de la tête de lecture	**TAPE**	**OFF**	Wiedergabe-Signal vom Wiedergabekopf Reproduce signal from reproduce head Signal enregistré de la tête de lecture
Eingangssignal links Input signal left Signal d'entrée gauche	**INPUT**	**OFF**	Eingangssignal rechts Input signal right Signal d'entrée droit
Wiedergabe-Signal vom Aufnahme-(SYNC-)Kopf Reproduce signal from record (SYNC) head Signal enregistré de la tête d'enregistrement	**INPUT**	**ON**	Eingangssignal rechts Input signal right Signal d'entrée droit

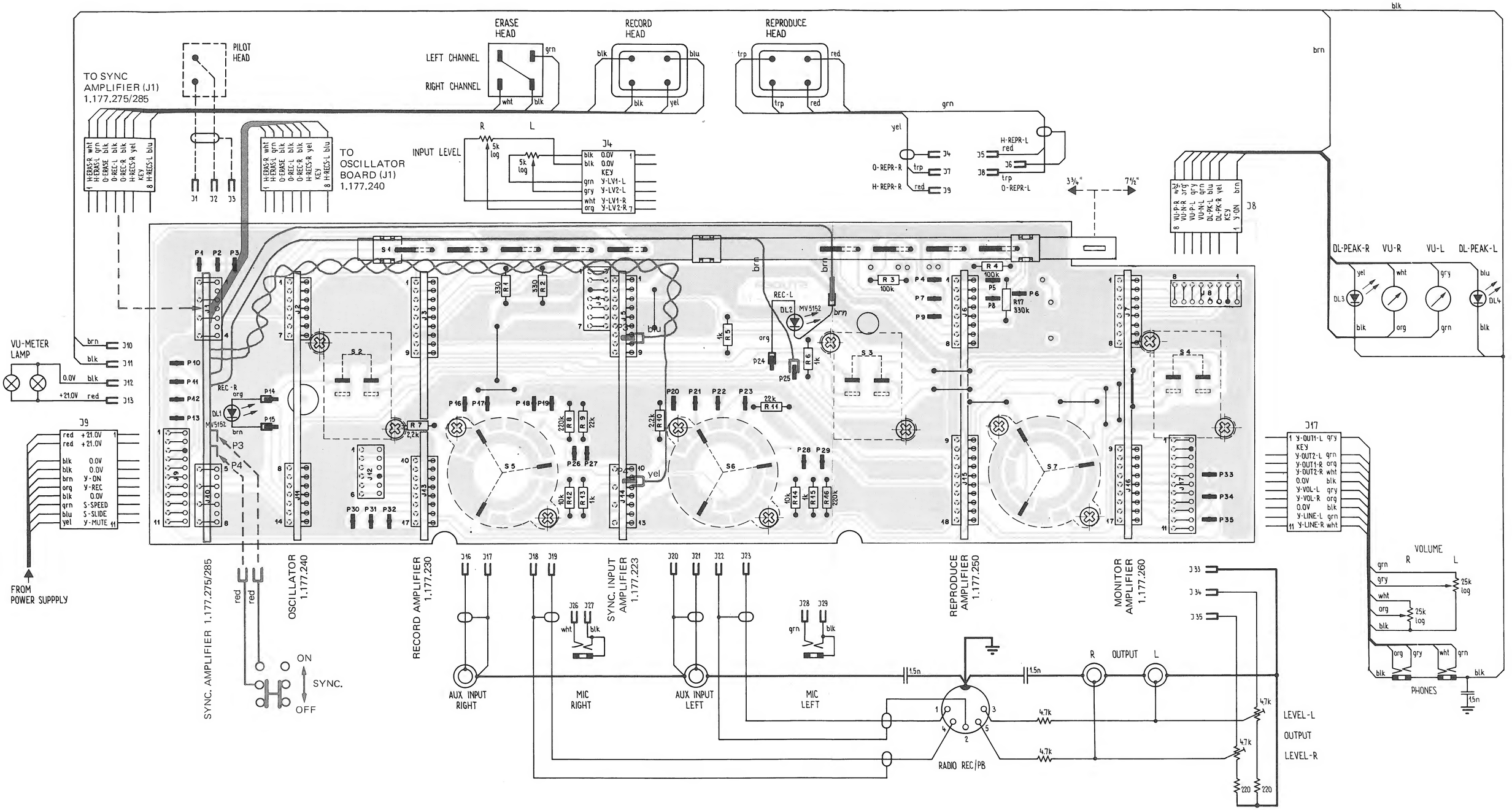
Frequenzgang:
19 cm/s 125 Hz ... 12 kHz + 2/–3 dB
38 cm/s 125 Hz ... 15 kHz + 2/–3 dB

Frequency response:
19 cm/s 125 Hz ... 12 kHz + 2/–3 dB
38 cm/s 125 Hz ... 15 kHz + 2/–3 dB

Réponse en fréquence:
19 cm/s 125 Hz ... 12 kHz + 2/–3 dB
38 cm/s 125 Hz ... 15 kHz + 2/–3 dB

2 x
24V/1Y





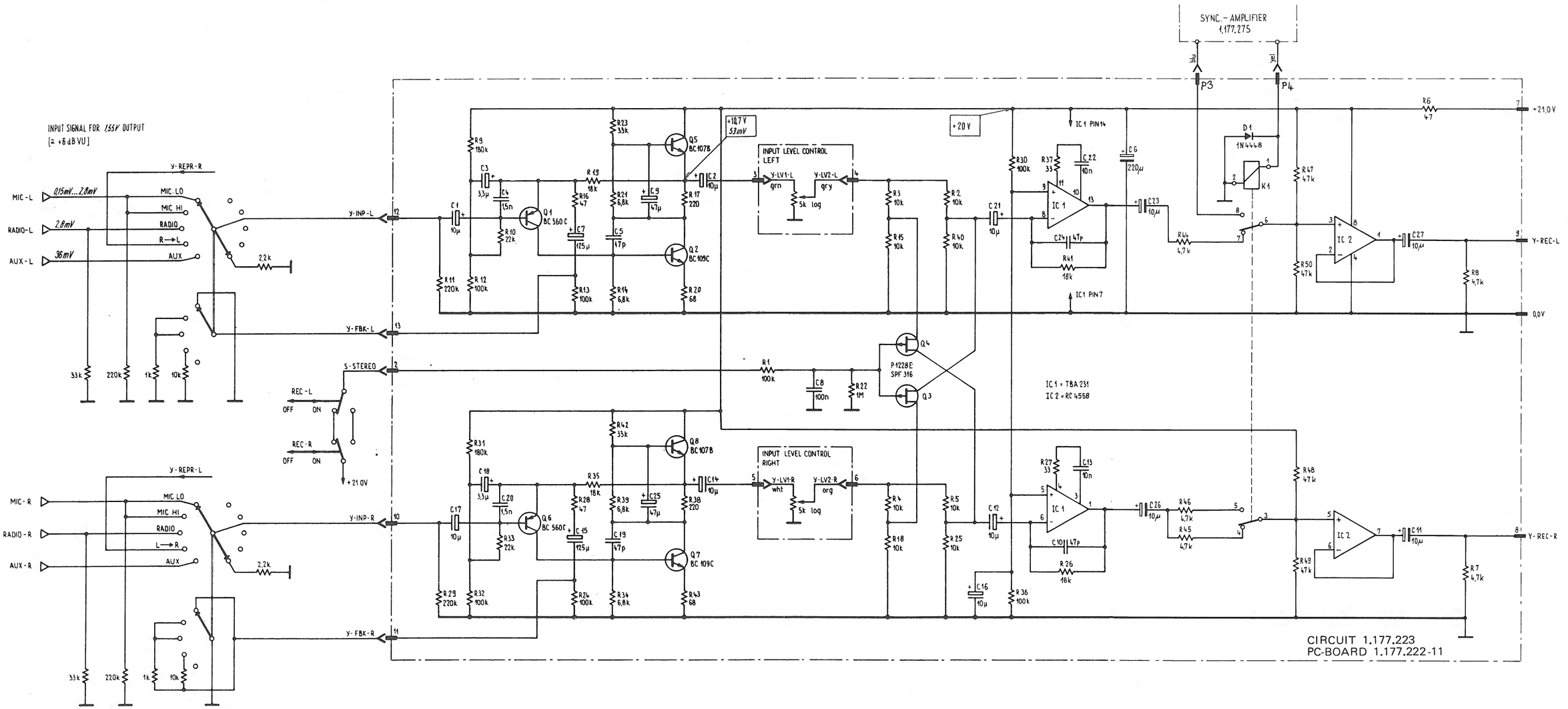
STUDER REVOX	B77 SYNC
AUDIO INTERCONNECTION BOARD	
1.177.210 (with SYNC WIRING)	ED1 09.79

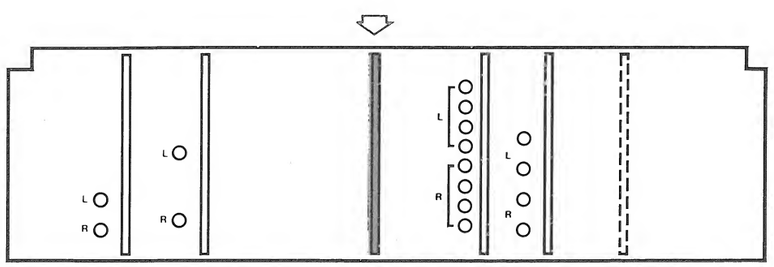
POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
J 01	54.01.0524	4-Pole	CIS-socket-strip		
J 02	54.01.0218	7-Pole	"		
J 03	54.01.0217	9-Pole	"		
J 04	54.01.0263	7-Pole	"		
J 05	54.01.0217	9-Pole	"		
J 06	54.01.0289	8-Pole	"		
J 07	54.01.0289	8-Pole	"		
J 08	54.01.0289	8-Pole	"		
J 09	54.01.0291	11-Pole	"		
J 10	54.01.0524	4-Pole	"		
J 11	54.01.0218	7-Pole	"		
J 12	54.01.0216	6-Pole	"		
J 13	54.01.0289	8-Pole	"		
J 14	54.01.0524	4-Pole	"		
J 15	54.01.0290	10-Pole	"		
J 16	54.01.0217	9-Pole	"		
J 17	54.01.0291	11-Pole	"		
P1-35	54.02.0320		AMP-Flat pin		
R 01	57.41.4331	330	5% .25W CF		
R 02	57.41.4331	330			
R 03	57.41.4104	100 K			
R 04	57.41.4104	100 K			
R 05	57.41.4102	1 K			
R 06	57.41.4102	1 K			
R 07	57.41.4222	2,2 K			
R 08	57.41.4224	220 K			
R 09	57.41.4223	22 K			
R 10	57.41.4222	2,2 K			
R 11	57.41.4223	22 K			
R 12	57.41.4103	10 K			
R 13	57.41.4102	1 K			
R 14	57.41.4103	10 K			
R 15	57.41.4102	1 K			
R 16	57.41.4224	220 K			
(1) R 17	57.11.4334	330 K			
S 1	1.177.210.01	special	Slide-Switch		
S2-S4	1.011.120.00	2-Pole	Toggle-Switch		
S5-S7	1.011.301.00	5-pos/3-Pole	Rotary-Switch		

CF = Carbon Film

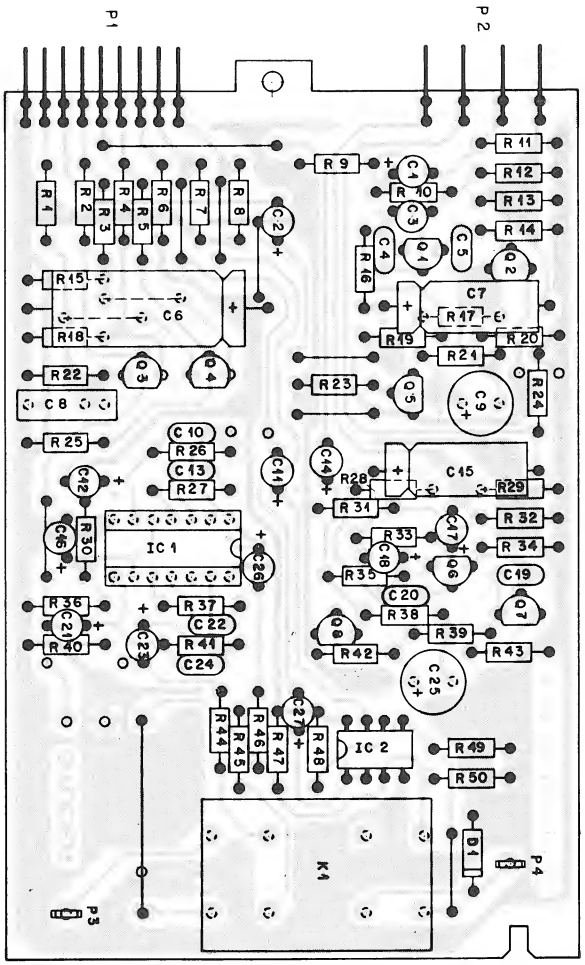
IND	DATE	NAME
④		
③		
②		
①	12.6.78	FM
○	10.5.77	Waser/gv

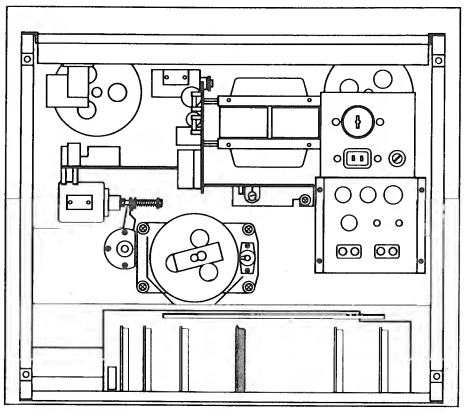
STUDER	Audio-Interconnection Board	1.177.210	PAGE 1 of 1





STUDER REVOX	B77 SYNC
SYNC -INPUT AMPLIFIER	
1.177.223	ED1 09.79


P1
P2
R 1
R 2
R 3
R 4
R 5
R 6
R 7
R 8
R 9
R 10
R 11
R 12
R 13
R 14
R 15
R 16
R 17
R 18
R 19
R 20
R 21
R 22
R 23
R 24
R 25
R 26
R 27
R 28
R 29
R 30
R 31
R 32
R 33
R 34
R 35
R 36
R 37
R 38
R 39
R 40
R 41
R 42
R 43
R 44
R 45
R 46
R 47
R 48
R 49
R 50
C 1
C 2
C 3
C 4
C 5
C6
C7
C 8
C9
C 10
C 11
C 12
C 13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25
C27
IC 1
IC 2
Q 1
Q 2
Q 3
Q 4
Q 5
Q 6
Q 7
Q 8
D 1
K1
P3
P4



POS NO	PART NO	VALUE	SPECIFICATIONS			EQUIVALENT MFR
C 01	59.30.4100	10 U	-20%	16V	TA	
C 02	59.30.4100	10 U				
C 03	59.30.4339	3.3 U				
C 04	59.32.1152	1500 P	-10%	50V	CER	
C 05	59.32.0470	47 P	-20%	50V	CER	
C 06	59.25.4221	220 U	-10%	25V	EL	
C 07	59.25.3121	125 U	-10%	16V	EL	
C 08	59.31.1104	0,1 U	20%	100V	MPETP	
C 09	59.22.5470	47 U	20%	25V	EL	
C 10	59.32.0470	47 P	-20%	50V	CER	
C 11	59.30.4100	10 U	-20%	16V	TA	
C 12	59.30.4100	10 U				
C 13	59.32.3103	0,01 U	+80%	40V=	CER	
C 14	59.30.4100	10 U	-20%	16V	TA	
C 15	59.25.3121	125 U	-10%	16V	EL	
C 16	59.30.4100	10 U	-20%	16V	TA	
C 17	59.30.4100	10 U				
C 18	59.30.4339	3.3 U				
C 19	59.32.0470	47 P	-20%	50V	CER	
C 20	59.32.1152	1500 P	-10%	50V	CER	
C 21	59.30.4100	10 U	-20%	16V	TA	
C 22	59.32.3103	0,01 U	+80%	40V=	CER	
C 23	59.30.4100	10 U	-20%	16V	TA	
C 24	59.32.0470	47 P	-20%	50V	CER	
C 25	59.22.5470	47 U	20%	25V	EL	
C 26	59.30.4100	10 U	-20%	16V	TA	
C 27	59.30.4100	10 U				
D 01	50.04.0125	1N 4448			Si	any
1 IC 1	50.05.0288	TBA 231				A
IC 2	50.05.0245	RC 4558				TI,Ray
K 01	56.04.0142	2 x U	2000 Ω, 24V			N,O
P 01	54.01.0220	9-Pole	PIN-Strip		AMP	
P 02	54.01.0470	4-Pole	PIN-Strip		AMP	
P 03	54.02.0320		Flat PIN 0.8		AMP	
P 04	54.02.0320		Flat PIN 0.8		AMP	
Q 01	50.03.0496	BC560C			PNP	
Q 02	50.03.0439	BC109C			NPN	
Q 03	50.03.0329	SPF316	P-Channel		J-FET	
Q 04	50.03.0329	SPF316	P-Channel		J-FET	
Q 05	50.03.0436	BC107B			NPN	

A = SGS-Ates
TI= Texas Instr.
Ray= Raytheon
N = National
O = Omron

CER = Ceramic
TA = Tantalum
EL = Electrolytic
MPETP = Metallized-polyester

IND	DATE	NAME
④		
③		
②		
①	29.9.78	RW/gv
○	24.8.78	

STUDER	Sync-Input Amplifier	1.177.223	PAGE 1 of 3

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
Q 06	50.03.0496	BC560C		PNP	
Q 07	50.03.0439	BC109C		NPN	
Q 08	50.03.0436	BC107B		NPN	
R 01	57.11.4104	100 k	5% .25W	CF	
R 02	57.11.4103	10 k			
R 03	57.11.4103	10 k			
R 04	57.11.4103	10 k			
R 05	57.11.4103	10 k			
R 06	57.11.4470	47			
R 07	57.11.4472	4,7 k			
R 08	57.11.4472	4,7 k			
R 09	57.11.4184	180 k			
R 10	57.11.4223	22 k			
R 11	57.11.4224	220 k			
R 12	57.11.4104	100 k			
R 13	57.11.4104	100 k			
R 14	57.11.4682	6,8 k			
R 15	57.11.4103	10 k			
R 16	57.11.4470	47			
R 17	57.11.4221	220			
R 18	57.11.4103	10 k			
R 19	57.11.4183	18 k			
R 20	57.11.4680	68			
R 21	57.11.4682	6,8 k			
R 22	57.11.4105	1 M			
R 23	57.11.4333	33 k			
R 24	57.11.4104	100 k			
R 25	57.11.4103	10 k			
R 26	57.11.4183	18 k			
R 27	57.11.4330	33			
R 28	57.11.4470	47			
R 29	57.11.4224	220 k			
R 30	57.11.4104	100 k			
R 31	57.11.4184	180 k			
R 32	57.11.4104	100 k			
R 33	57.11.4223	22 k			
R 34	57.11.4682	6,8 k			
R 35	57.11.4183	18 k			
R 36	57.11.4104	100 k			
R 37	57.11.4330	33			
R 38	57.11.4221	220			
R 39	57.11.4682	6,8 k			
R 40	57.11.4103	10 k			
R 41	57.11.4183	18 k			
R 42	57.11.4333	33 k			
R 43	57.11.4680	68			
R 44	57.11.4472	4,7 k			
R 45	57.11.4472	4,7 k			
R 46	57.11.4472	4,7 k			

CF = Carbon Film

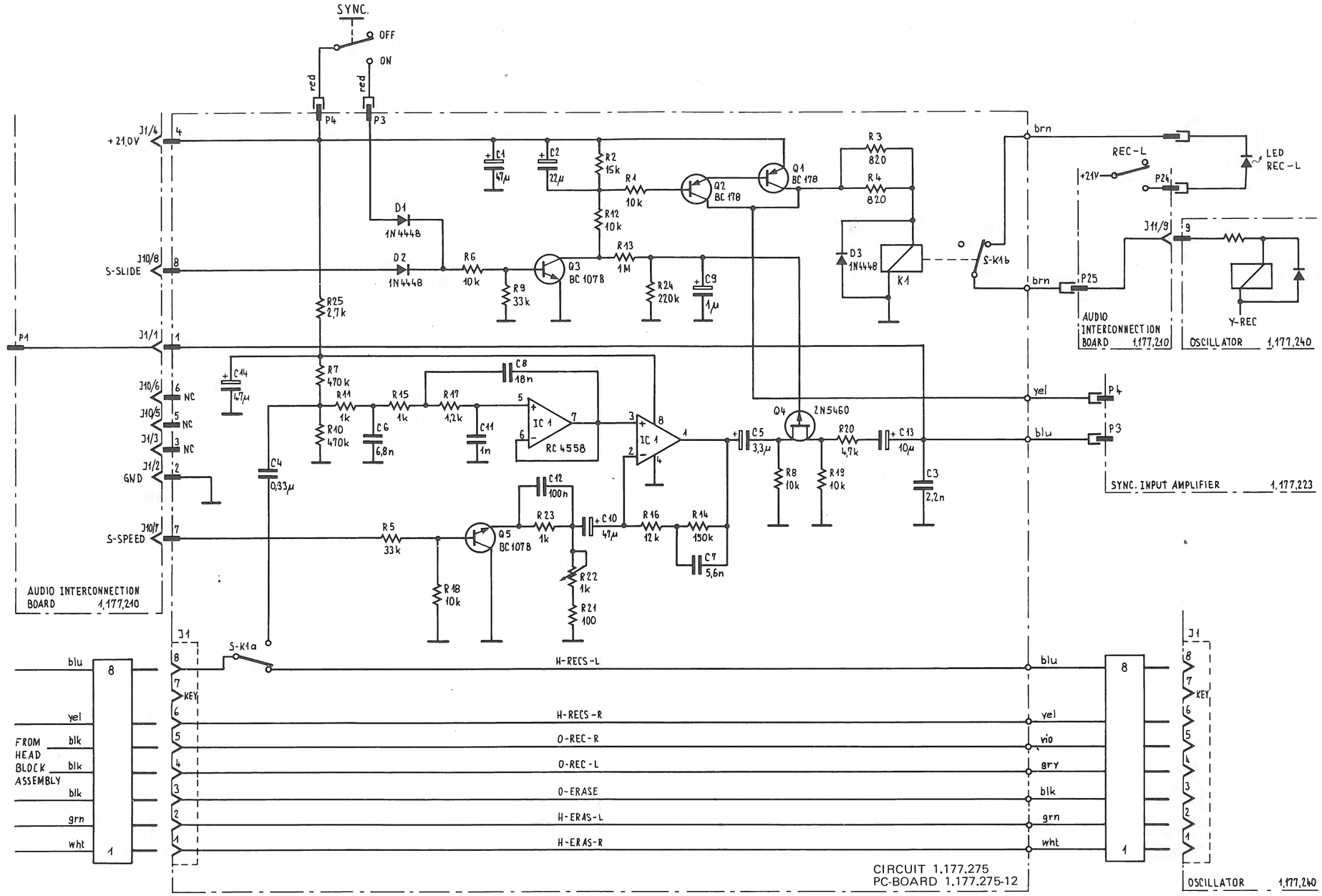
IND	DATE	NAME
④		
③		
②		
①	29.9.78	FM RW/gv
○	24.8.78	

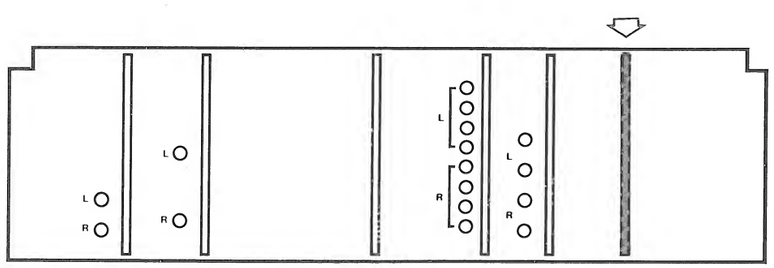
POS NO	PART NO	VALUE	SPECIFICATIONS EQUIVALENT MFR
R 47	57.11.4473	47 k	5% .25W CF
R 48	57.11.4473	47 k	
R 49	57.11.4473	47 k	
R 50	57.11.4473	47 k	

CF = Carbon Film

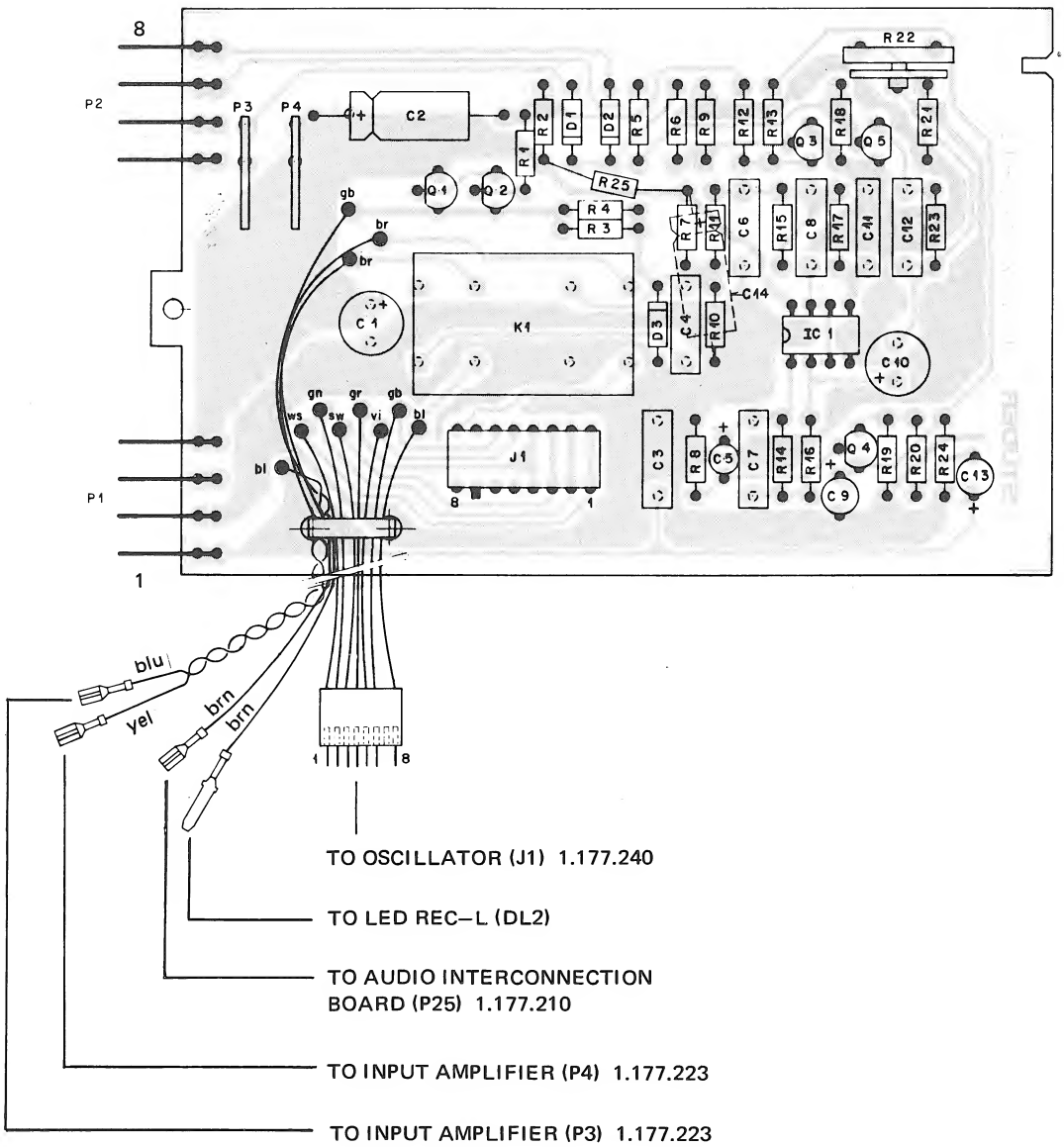
IND	DATE	NAME
④		
③		
②		
①	29.9.78	JM
○	24.8.78	RW/gv

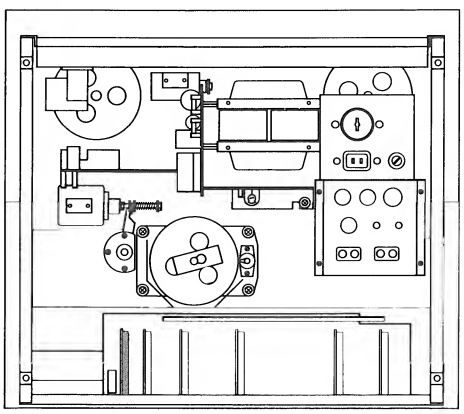
STUDER | Sync.-Input Amplifier | 1.177.223 | PAGE 3 of 3





STUDER REVOX	B77 SYNC
SYNC-AMPLIFIER 3 3/4 – 7 1/2"	
1.177.275	ED1 09.79


8
P2
P3
P4
P1
1
C2
R22
R2
D1
D2
R5
R6
R9
R12
R13
R18
R21
Q1
Q2
Q3
Q5
R25
R4
R3
R7
R11
C6
R15
C8
R17
C44
C12
R23
gb
br
br
C1
K1
C14
D3
C4
R10
IC1
C10
gn
gr
gb
ws
sw
vi
bl
bl
J1
8
1
C3
R8
C5
C7
R14
R16
Q4
R19
R20
R24
C13
C9
blu
yel
brn
brn
1
8
TO OSCILLATOR (J1) 1.177.240
TO LED REC–L (DL2)
TO AUDIO INTERCONNECTION
BOARD (P25) 1.177.210
TO INPUT AMPLIFIER (P4) 1.177.223
TO INPUT AMPLIFIER (P3) 1.177.223



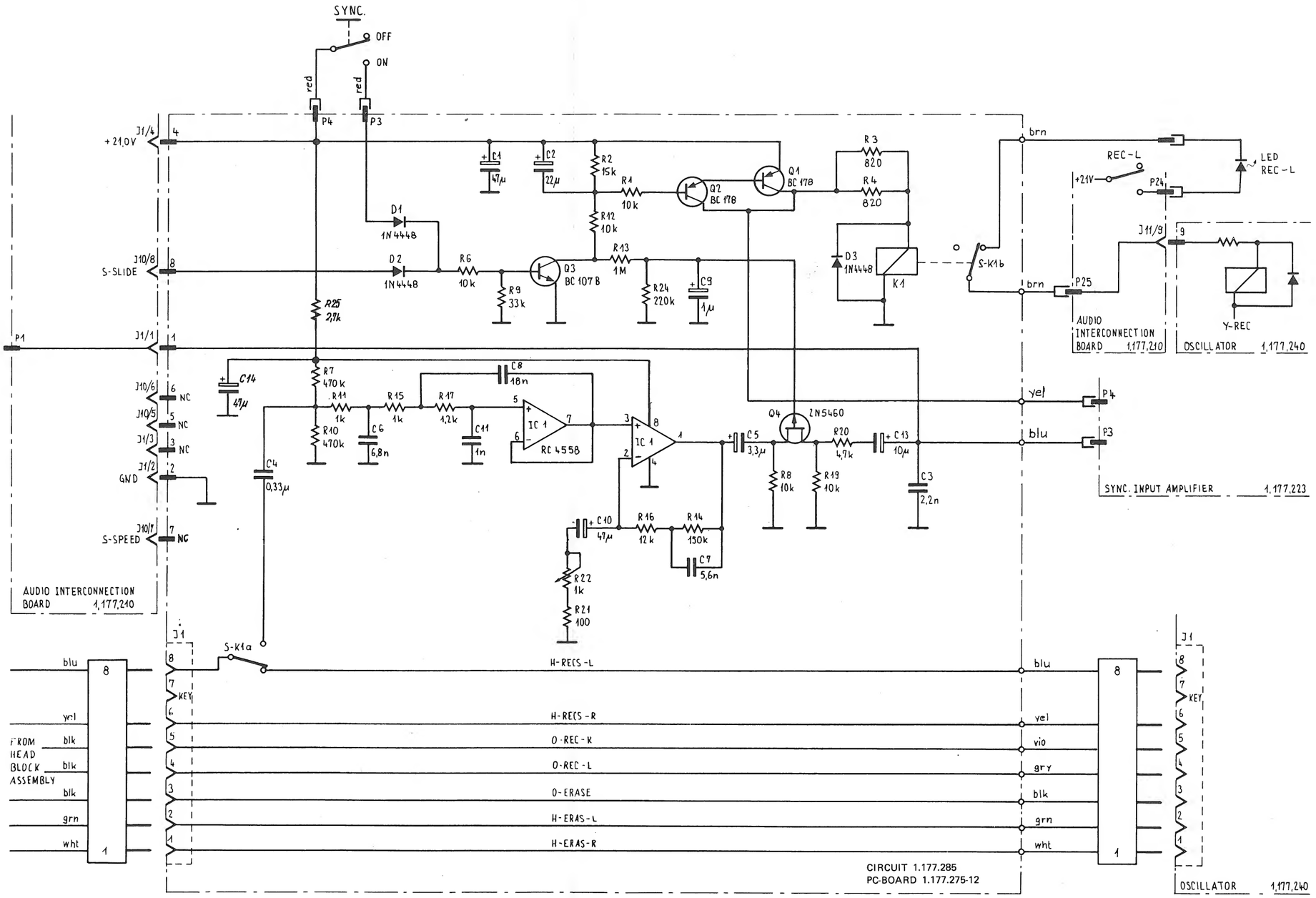
IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT			MFR
	C 01	59.22.5470	47 µF	10%	25V	EL	
	C 02	59.25.5220	22 µF	10%	40V	EL	
	C 03	59.11.6222	2200 pF	5%	400V	PC	
	C 04	59.31.0334	0.33 µF	20%	63V	MPETP	
	C 05	59.30.6339	3.3 µF	20%	35V	TA	
	C 06	59.31.9682	6800 pF	10%	160V	PETP	
	C 07	59.11.3562	5600 pF	5%	160V	PC	
	C 08	59.12.4183	0.018 µF	5%	250V	MPETP	
	C 09	59.30.6109	1 µF	20%	35V	TA	
	C 10	59.22.5470	47 µF	10%	25V	EL	
	C 11	59.31.3102	1000 pF	20%	400V	PETP	
	C 12	59.31.1104	0.1 µF	20%	100V	MPETP	
	C 13	59.30.7100	10 µF	20%	25V	TA	
	C 14	59 .25 .3470	47 µF		16V	EL	
	D 01	50.04.0125	1 N 4448	Si			
	D 02	50.04.0125	1 N 4448	Si			
	D 03	50.04.0125	1 N 4448	Si			
	IC 01	50.05.0245	RC 4558			Lin RC4558DN	
	J 01	54.01.0306	8-Pole			Cis	
	K 01	56.04.0140	2 x U	Relay			
	P 01	54.01.0470	4-Pole			Cis	
	P 02	54.01.0470	4-Pole			Cis	
	P 03	54.02.0328	2.8x0.8	Flat-Pin			
	P 04	54.02.0328	2.8x0.8	Flat-Pin			
	Q 01	50.03.0318	BC 178			PNP BC252/308	

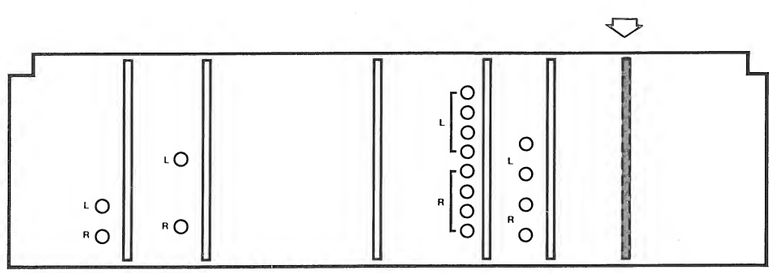
IND	DATE	NAME
④		
③		
②		
①		
○	19.1.79	R.Weibel/gv

STUDER	Sync-Amplifier	1.177.275-00	PAGE 1 OF 2

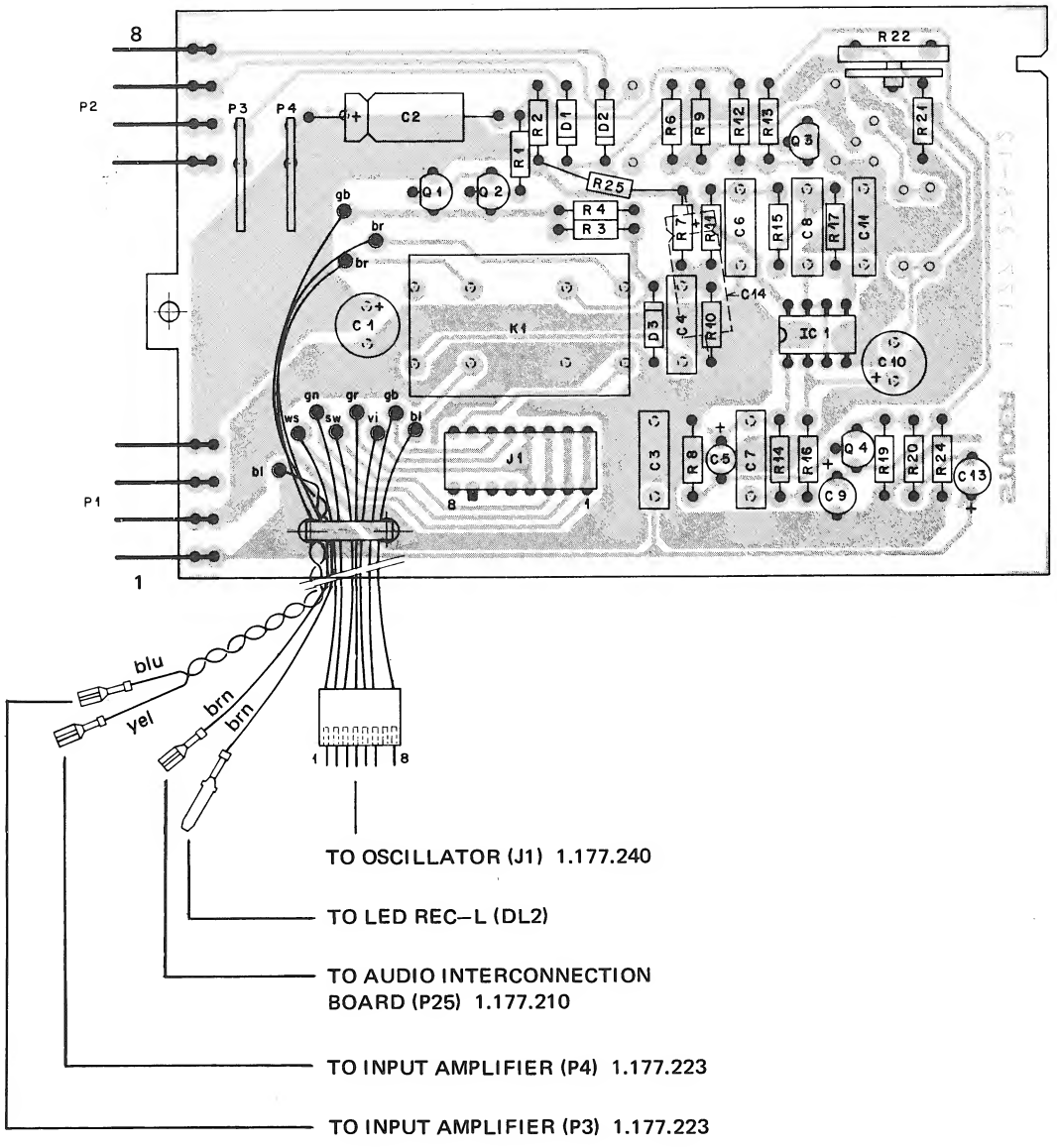
IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	Q 02	50.03.0318	BC 178	PNP BC252/308	
	Q 03	50.03.0436	BC 107	NPN BC237/547	
	Q 04	50.03.0312	2N5460	FD-Fet	
	Q 05	50.03.0436	BC 107	NPN BC237/547	
	R 01	57.11.4103	10 k	5% .25W CF	
	R 02	57.11.4153	15 k		
	R 03	57.11.4821	820		
	R 04	57.11.4821	820		
	R 05	57.11.4333	33 k		
	R 06	57.11.4103	10 k		
	R 07	57.11.4474	470 k		
	R 08	57.11.4103	10 k		
	R 09	57.11.4333	33 k		
	R 10	57.11.4474	470 k		
	R 11	57.11.4102	1 k		
	R 12	57.11.4103	10 k		
	R 13	57.11.4105	1 M		
	R 14	57.11.4154	150 k		
	R 15	57.11.4102	1 k		
	R 16	57.11.4123	12 k		
	R 17	57.11.4122	1.2 k		
	R 18	57.11.4103	10 k		
	R 19	57.11.4103	10 k		
	R 20	57.11.4472	4.7 k		
	R 21	57.11.4101	100		
	R 22	58.19.0102	1 k	20% .15W PCF	
	R 23	57.11.4102	1 k	5% .25W CF	
	R 24	57.11.4224	220 k		
	R 25	57 .11. 4272	2,7 k	5% .25W CF	

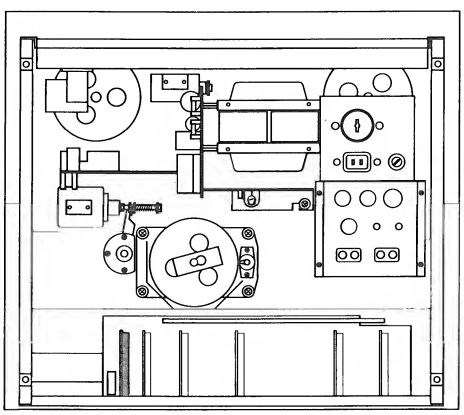
IND	DATE	NAME
④		
③		
②		
①		
○	19.1.79	R.Weibel/gv





STUDER REVOX	B77 SYNC
SYNC-AMPLIFIER NAB 7 1/2–15"	
1.177.285	ED1 09.79


8
P2
P3
P4
C2
R22
R2
D1
D2
R6
R9
R12
R13
R21
Q3
R1
Q1
Q2
R25
gb
br
br
R4
R3
R7
R11
C6
R15
C8
R17
C11
C14
C1
K1
D3
C4
R10
IC1
C10
gn
gr
gb
ws
sw
vi
bl
bl
J1
C3
R8
C5
C7
R14
R16
Q4
R19
R20
R24
C13
C9
P1
1
8
1
blu
yel
brn
brn
1
8
TO OSCILLATOR (J1) 1.177.240
TO LED REC–L (DL2)
TO AUDIO INTERCONNECTION BOARD (P25) 1.177.210
TO INPUT AMPLIFIER (P4) 1.177.223
TO INPUT AMPLIFIER (P3) 1.177.223



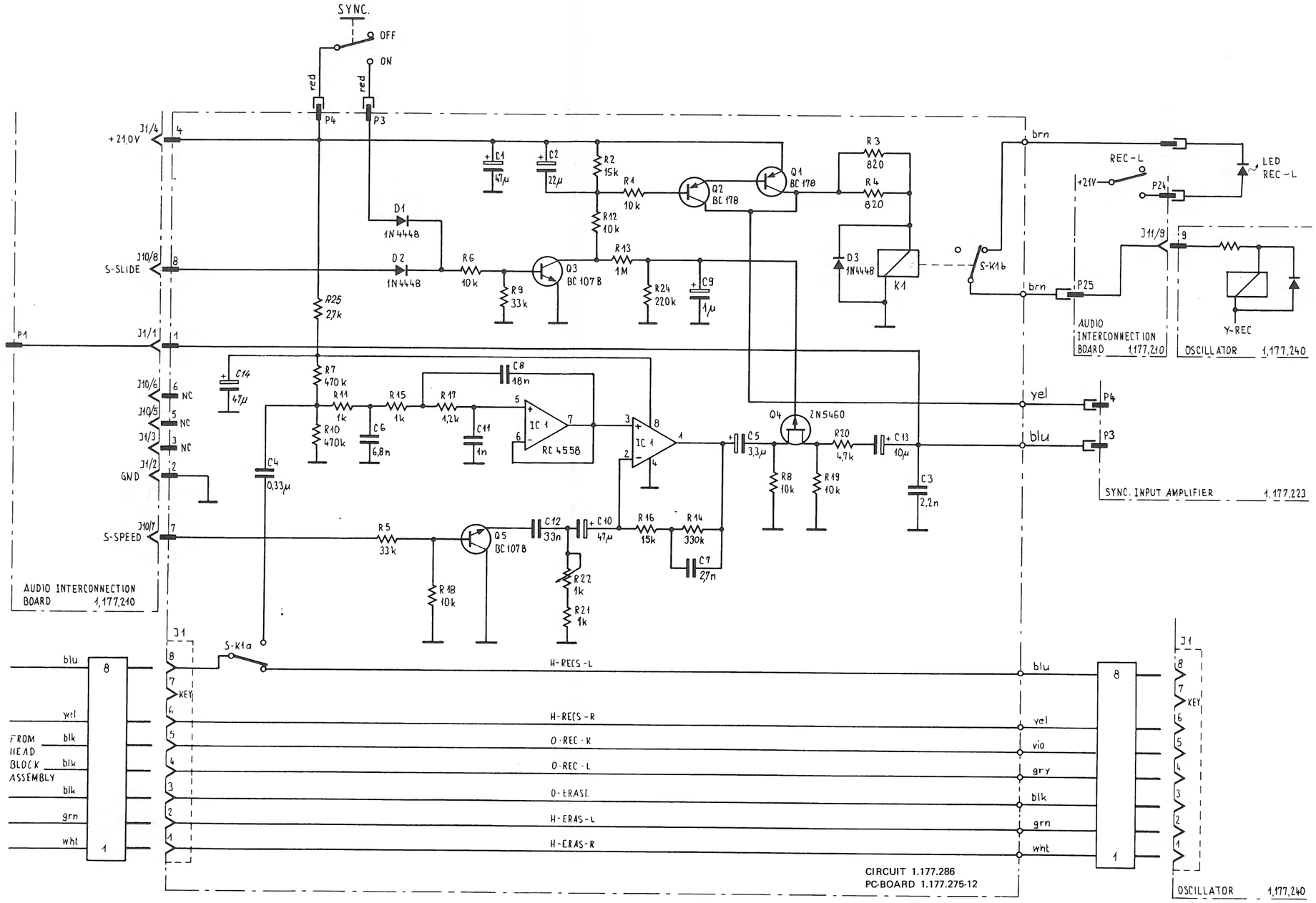
IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT			MFR
	C 01	59.22.5470	47 µF	10%	25V	EL	
	C 02	59 25.5220	22 µF	10%	40V	EL	
	C 03	59.11.6222	2200 pF	5%	400V	PC	
	C 04	59.31.0334	0.33 µF	20%	63V	MPETP	
	C 05	59.30.6339	3.3 µF	20%	35V	TA	
	C 06	59.31.9682	6800 pF	10%	160V	PETP	
	C 07	59.11.3562	5600 pF	5%	160V	PC	
	C 08	59.12.4183	0.018 µF	5%	250V	MPETP	
	C 09	59.30.6109	1 µF	20%	35V	TA	
	C 10	59.22.5470	47 µF	10%	25V	EL	
	C 11	59.31.3102	1000 pF	20%	400V	PETP	
	C 12						
	C 13	59.30.7100	10 µF	20%	25V	TA	
	C 14	59 .25 .3470	47 µF		16V	EL	
	D 01	50.04.0125	1 N 4448	Si			
	D 02	50.04.0125	1 N 4448	Si			
	D 03	50.04.0125	1 N 4448	Si			
	IC 01	50.05.0245	RC 4558			Lin RC4558DN	
	J 01	54.01.0306	8-Pole			Cis	
	K 01	56.04.0140	2 x U	Relay			
	P 01	54.01.0470	4-Pole			Cis	
	P 02	54.01.0470	4-Pole			Cis	
	P 03	54.02.0328	2.8x0.8	Flat-Pin			
	P 04	54.02.0328	2.8x0.8	Flat-Pin			
	Q 01	50.03.0318	BC 178			PNP BC252/308	

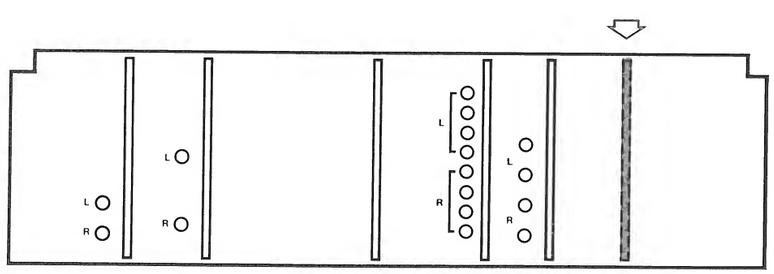
IND	DATE	NAME
④		
③		
②		
①		
○	25.4.79	R.Weibel/gv

STUDER	Sync-Amplifier NAB 7 1/2-15"	1.177.285-00	PAGE 1 OF 2

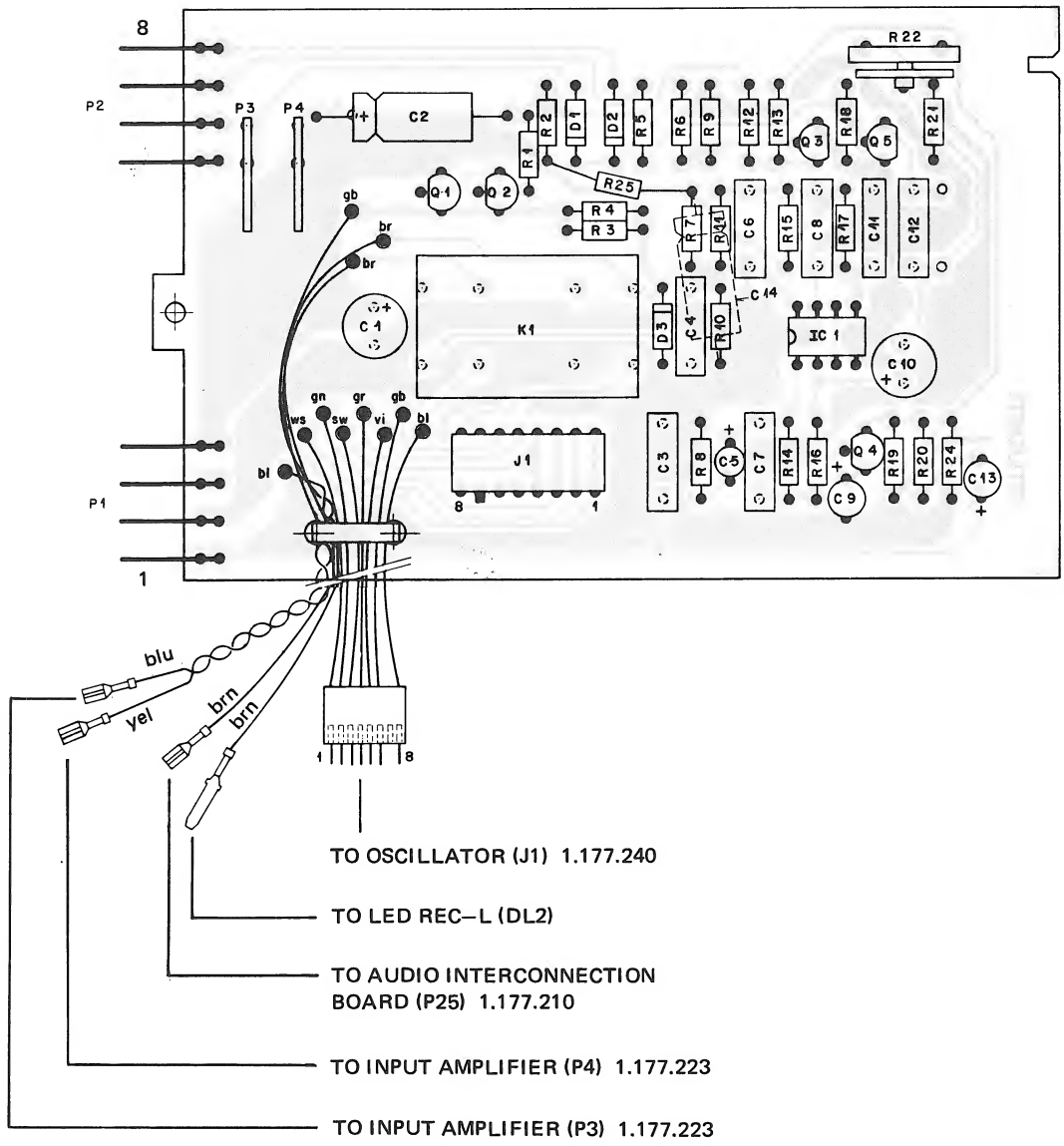
IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	Q 02	50.03.0318	BC 178	PNP BC252/308	
	Q 03	50.03.0436	BC 107	NPN BC237/547	
	Q 04	50.03.0312	2N5460	FD-Fet	
	Q 05				
	R 01	57.11.4103	10 k	5% .25W CF	
	R 02	57.11.4153	15 k		
	R 03	57.11.4821	820		
	R 04	57.11.4821	820		
	R 05				
	R 06	57.11.4103	10 k		
	R 07	57.11.4474	470 k		
	R 08	57.11.4103	10 k		
	R 09	57.11.4333	33 k		
	R 10	57.11.4474	470 k		
	R 11	57.11.4102	1 k		
	R 12	57.11.4103	10 k		
	R 13	57.11.4105	1 M		
	R 14	57.11.4154	150 k		
	R 15	57.11.4102	1 k		
	R 16	57.11.4123	12 k		
	R 17	57.11.4122	1.2 k		
	R 18				
	R 19	57.11.4103	10 k		
	R 20	57.11.4472	4.7 k		
	R 21	57.11.4101	100		
	R 22	58.19.0102	1 k	20% .15W PCF	
	R 23				
	R 24	57.11.4224	220 k		
	R 25	57 .11. 4272	2,7 k	5% .25W CF	

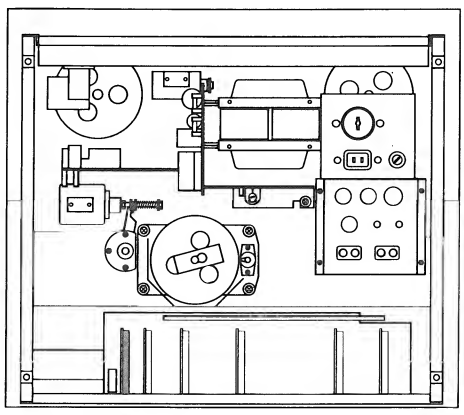
IND	DATE	NAME
④		
③		
②		
①		
○	25.4.79	R.Weibel/gv





STUDER REVOX	B77 SYNC
SYNC-AMPLIFIER IEC 7 1/2–15"	
1.177.286	ED1 09.79


8
P2
P3
P4
P1
1
C2
R1
R2
D1
D2
R5
R6
R9
R12
R13
R18
R21
R22
Q1
Q2
Q3
Q5
R25
R4
R3
R7
R11
C6
R15
C8
R17
C11
C12
C14
C1
K1
D3
C4
R10
IC1
C10
gb
br
br
gn
gr
gb
ws
sw
vi
bl
bl
J1
8
1
C3
R8
C5
C7
R14
R16
Q4
R19
R20
R24
C13
C9
blu
yel
brn
brn
1
8
TO OSCILLATOR (J1) 1.177.240
TO LED REC–L (DL2)
TO AUDIO INTERCONNECTION
BOARD (P25) 1.177.210
TO INPUT AMPLIFIER (P4) 1.177.223
TO INPUT AMPLIFIER (P3) 1.177.223



IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT			MFR
	C 01	59.22.5470	47 µ	10%	25V	EL	
	C 02	59.25.5220	22 µ	10%	40V	EL	
	C 03	59.11.6222	2200 p	5%	400V	PC	
	C 04	59.31.0334	0.33 µ	20%	63V	MPETP	
	C 05	59.30.6339	3.3 µ	20%	35V	TA	
	C 06	59.31.9682	6800 p	10%	160V	PETP	
	C 07	59.11.6272	2700 p	5%	160V	PC	
	C 08	59.12.4183	0.018 µ	5%	250V	MPETP	
	C 09	59.30.6109	1 µ	20%	35V	TA	
	C 10	59.22.5470	47 µ	10%	25V	EL	
	C 11	59.31.3102	1000 p	20%	400V	PETP	
	C 12	59.12.2333	0.033µ	5%	160V	MPETP	
	C 13	59.30.7100	10 µ	20%	25V	TA	
	C 14	59.25.3470	47 µ		16V	EL	
	D 01	50.04.0125	1N4448			Si	
	D 02	50.04.0125	1N4448				
	D 03	50.04.0125	1N4448				
	IC 01	50.05.0245	RC4558			Lin RC4558DN	
	J 01	54.01.0306	8-Pole			Cis	
	K 01	56.04.0140	2 x U	Relay			
	P 01	54.01.0470	4-Pole			Cis	
	P 02	54.01.0470	4-Pole			Cis	
	P 03	54.02.0328	2.8x0.8	Flat-Pin			
	P 04	54.02.0328	2.8x0.8	Flat-Pin			

IND	DATE	NAME
④		
③		
②		
①		
○	14.8.79	R.W/gv

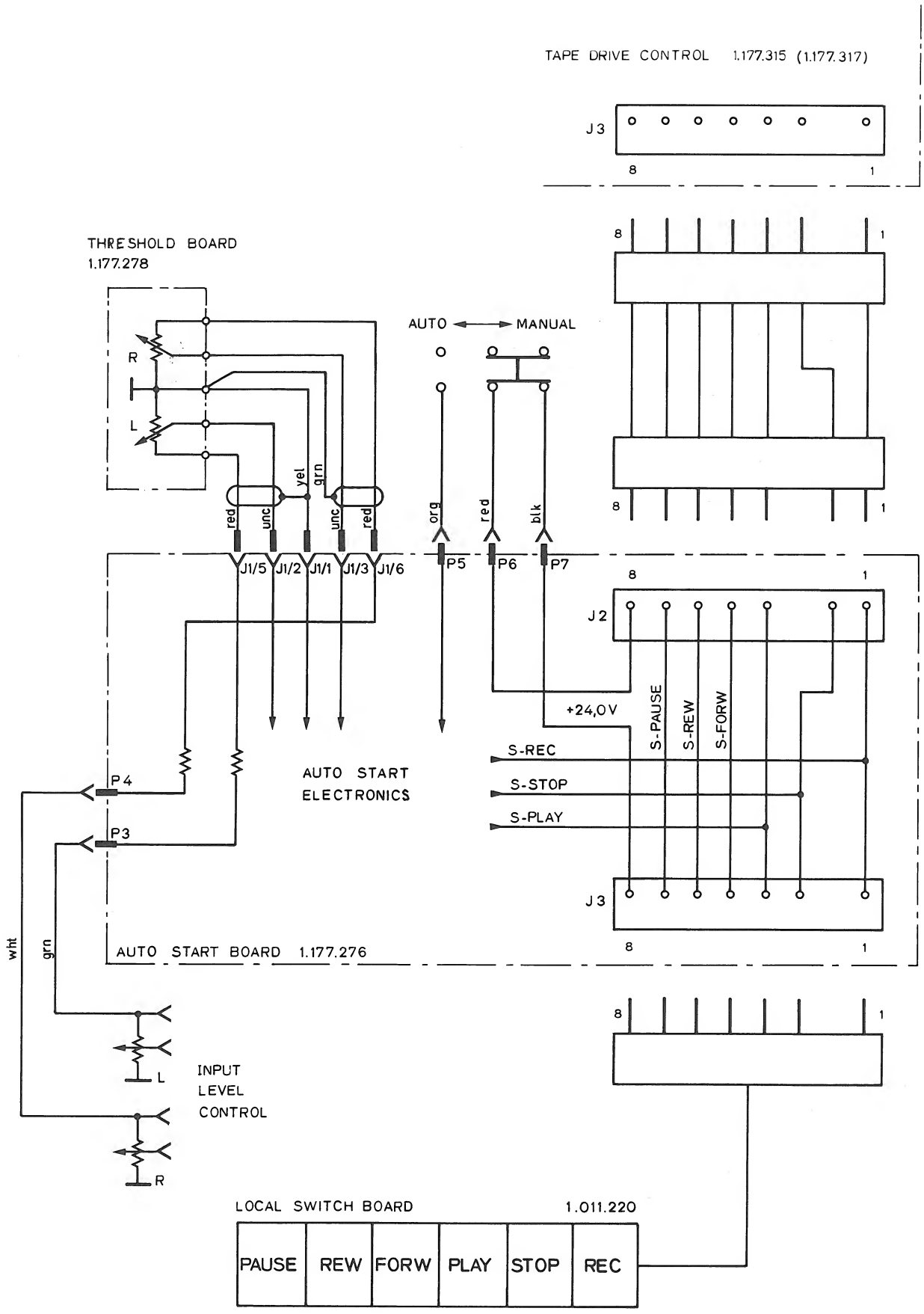
STUDER	Sync-Amplifier IEC 7 1/2-15"	PL 1.177.286.00	PAGE 1 OF 3

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	Q 01	50.03.0318	BC178	PNP BC252/308	
	Q 02	50.03.0318	BC178	PNP BC252/308	
	Q 03	50.03.0436	BC107	NPN BC237/547	
	Q 04	50.03.0312	2N5460	FD-Fet	
	Q 05	50.03.0436	BC107	NPN BC237/547	
	R 01	57.11.4103	10 k	5% .25W CF	
	R 02	57.11.4153	15 k		
	R 03	57.11.4821	820		
	R 04	57.11.4821	820		
	R 05	57.11.4333	33 k		
	R 06	57.11.4103	10 k		
	R 07	57.11.4474	470 k		
	R 08	57.11.4103	10 k		
	R 09	57.11.4333	33 k		
	R 10	57.11.4474	470 k		
	R 11	57.11.4102	1 k		
	R 12	57.11.4103	10 k		
	R 13	57.11.4105	1 M		
	R 14	57.11.4334	330 k		
	R 15	57.11.4102	1 k		
	R 16	57.11.4153	15 k		
	R 17	57.11.4122	1.2 k		
	R 18	57.11.4103	10 k		
	R 19	57.11.4103	10 k		
	R 20	57.11.4472	4.7 k		
	R 21	57.11.4102	1 k		
	R 22	58.19.0102	1 k	20% .15W PCF	
	R 23				

IND	DATE	NAME
④		
③		
②		
①		
○	14.8.79	R.W/gv

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	R 24	57.11.4224	220 k	5% .25W CF	
	R 25	57.11.4272	2.7 k		

IND	DATE	NAME
④		
③		
②		
①		
○	14.8.79	R.W/gv



STUDER REVOX	B77 AUTO
AUTO START WIRING	
(1.177.276)	ED1 09.79

Schaltungsbeschreibung zu Tonbandgerät REVOX B77 AUTO

B77 AUTO START Logik 1.177.276
(Zusatz zu Laufwerksteuerung)

Diese Schaltung ermöglicht den automatischen Start in Aufnahmebetrieb bei Eintreffen eines Schallereignisses. Nach Ablauf einer in Grenzen wählbaren Zeit nach Eintreffen des letzten Schallereignisses, wird das Gerät automatisch auf Stop gesetzt.

Bei Automatik-Betrieb (Schalter AUTO/MANUAL hinter der Abdeckklappe) werden die Laufwerktasten, sofern ein Band eingelegt ist, ausser Betrieb gesetzt.

Das NF-Signal beider Kanäle wird derart weiterverarbeitet, dass das Tonbandgerät mit einem Impuls auf Aufnahme geschaltet wird.

Die Ansprechschwelle für den Start kann mit den Reglern hinter der Abdeckplatte für beide Kanäle getrennt eingestellt werden (sie ist von der Position der Eingangspegelregler unabhängig).

Nach Eintreffen des letzten Signals wird der Timer NE555 aktiviert. Dieser sendet verzögert den Stop-Impuls. Die Verzögerung wird mit R20 (Print 1.177.276) eingestellt.

AUTO-START Montage
Da Eingriffe in das Gerät notwendig sind, ist kein Nachrüstsatz erhältlich. Das Tonbandgerät B77 AUTO ist als Spezialversion erhältlich.

AUTO-START Einstellung
– AUTO-START Regler auf Stellung ON
– Ansprechschwelle mit den beiden Threshold-Reglern für einen oder beide Kanäle einstellen
– Ausschaltverzögerung mit R20 (auf AUTO-START Logik 1.177.276) von der Lötseite her einstellen (Gehäuse entfernen).

Bemerkung:
Die Ausschaltverzögerung ist ab Werk auf 5 s eingestellt, der einstellbare Bereich beträgt 0,5 ... 30 s.

Circuit description for REVOX B77 AUTO-START Recorder

B77 AUTO-START Circuit 1.177.276
(additional to tape transport control)

This circuit makes the automatic audio-signal-dependent activation of the recording mode possible. After the audio signal has ceased, the recording cycle will be maintained for an adjustable period of time before the machine returns to stop.

With automatic operation selected (AUTO/MANUAL switch behind the front flap), the tape transport control buttons are disabled if the recorder is loaded with tape.

The audio signal entering both channels is processed in a manner, which produces a switching impulse to activate the recording circuits.

By means of rotary controls behind the front flap, the operating threshold can be adjusted separately for each channel. This adjustment is independent of the setting of the record level controls.

If an input signal is no longer present, timer NE555 becomes activated to release a time delayed STOP impulse. The length of this time delay can be adjusted with R22 on circuit board 1.177.276.

AUTO START Installation
The AUTO START electronics are not available as a retrofit item, because of the various wiring changes that are required. The model B77 AUTO tape recorder must be ordered as such.

AUTO START calibration
– AUTO START controls switched ON
– Adjust operating threshold on one or both channels to the desired level.
– Adjust turn-off delay with R22 (accessible from the soldered side of the AUTO START circuit 1.177.276 after removal of the recorder from its case).

Note:
The turn-off delay is factory adjusted to 5 s. The delay is adjustable over a range from 0.5 ... 30 s.

Descriptions des circuits du magnétophone B77 AUTO

Logique B77 AUTO START 1.177.276
(supplémentaire au commande du mécanisme)

Ce circuit permet la mise en marche automatique de l'appareil par la présence d'un signal audio. A la fin du signal, l'appareil s'arrête automatiquement après un temps ajustable.

En fonction automatique (sélecteur AUTO/MANUAL, sous le cache escamotable), si la bande magnétique est mis en place, les organes de commande du mécanisme sont hors fonction.

Le signal BF des deux canaux est traité de manière à fournir une impulsion pour la commande d'enregistrement de l'appareil.

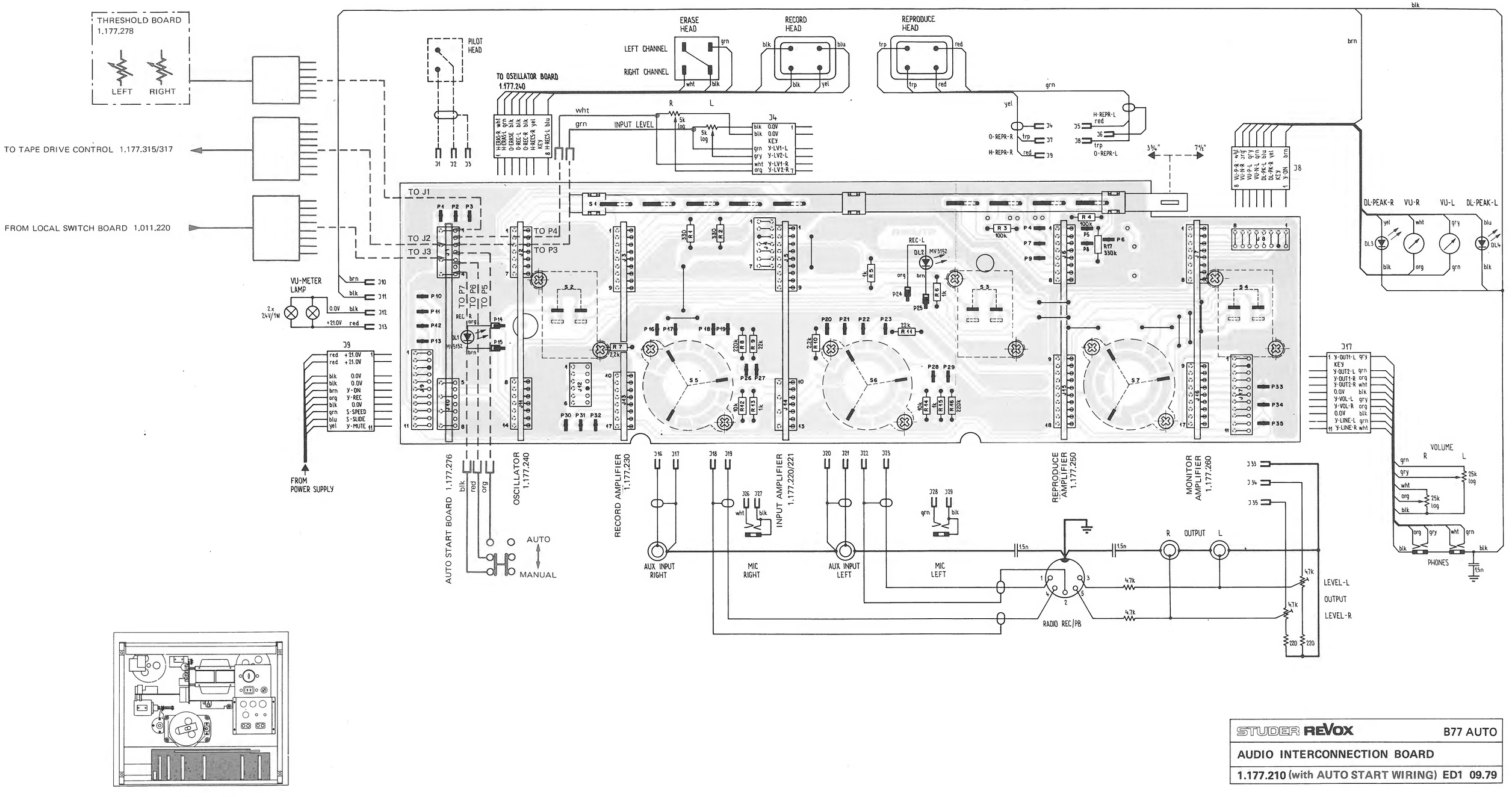
Le seuil de commutation pour le démarrage de l'appareil peut être ajusté par les réglages situés sous le cache escamotable. Le seuil de commutation n'est pas dépendant des réglages de niveau d'entrée.

A la fin du signal le "timer" NE555 est activé et donne l'impulsion "stop". L'ajustage du retard se fait par R20 (circuit 1.177.276).

Montage AUTO START
Il n'en existe pas de kit de montage en raison de l'adaption spéciale dans l'appareil. Le magnétophone B77 AUTO n'est en vente qu'en version spéciale.

L'ajustage de l'AUTO START
– Touche AUTO START sur ON
– Ajustez à l'aide des deux réglages "Threshold" le seuil de commutation pour un ou les deux canaux
– Ajustez le retard à l'aide de R20 (circuit 1.177.276) sur le côté soudure du circuit.

Note
Le retard est ajusté d'usine à 5 s. La gamme de réglage varie de 0.5 ... 30 s.



STUDER REVOX	B77 AUTO
AUDIO INTERCONNECTION BOARD	
1.177.210 (with AUTO START WIRING) ED1 09.79	

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
J 01	54.01.0524	4-Pole	CIS-socket-strip		
J 02	54.01.0218	7-Pole	"		
J 03	54.01.0217	9-Pole	"		
J 04	54.01.0263	7-Pole	"		
J 05	54.01.0217	9-Pole	"		
J 06	54.01.0289	8-Pole	"		
J 07	54.01.0289	8-Pole	"		
J 08	54.01.0289	8-Pole	"		
J 09	54.01.0291	11-Pole	"		
J 10	54.01.0524	4-Pole	"		
J 11	54.01.0218	7-Pole	"		
J 12	54.01.0216	6-Pole	"		
J 13	54.01.0289	8-Pole	"		
J 14	54.01.0524	4-Pole	"		
J 15	54.01.0290	10-Pole	"		
J 16	54.01.0217	9-Pole	"		
J 17	54.01.0291	11-Pole	"		
P1-35	54.02.0320		AMP-Flat pin		
R 01	57.41.4331	330	5% .25W CF		
R 02	57.41.4331	330			
R 03	57.41.4104	100 K			
R 04	57.41.4104	100 K			
R 05	57.41.4102	1 K			
R 06	57.41.4102	1 K			
R 07	57.41.4222	2,2 K			
R 08	57.41.4224	220 K			
R 09	57.41.4223	22 K			
R 10	57.41.4222	2,2 K			
R 11	57.41.4223	22 K			
R 12	57.41.4103	10 K			
R 13	57.41.4102	1 K			
R 14	57.41.4103	10 K			
R 15	57.41.4102	1 K			
R 16	57.41.4224	220 K			
(1) R 17	57.11.4334	330 K			
S 1	1.177.210.01	special	Slide-Switch		
S2-S4	1.011.120.00	2-Pole	Toggle-Switch		
S5-S7	1.011.301.00	5-pos/3-Pole	Rotary-Switch		

CF = Carbon Film

IND	DATE	NAME
④		
③		
②		
①	12.6.78	Fl
○	10.5.77	Waser/gv

STUDER | Audio-Interconnection Board | 1.177.210 | PAGE 1 of 1

THRESHOLD BOARD 1.177.278

R L

R1 2,5k R2 2,5k

yel grn

shield red unc. unc. red

J1 1 5 3 4 2 6

INPUT LEVEL CONTROL

grn gry wht org

L R

3 4 5 6

INPUT AMPLIFIER 1.177.221

P3 P4

IC 1 = RC 4558
IC 2 = NE 555

P2

8 NC
7 NC
6 NC
5 NC

TO AUDIO INTERCONNECTION BOARD (11/310) 1.177.210

P1

4 NC
3 NC
2 0,0V
1 NC

R17 10k R16 10k R23 6,8k R18 6,8k

C3 0,1µ

R2 100k R3 220k R10 100k

IC 1

C4 3,3µ

D1 15V C5 100µ

R1 3,3k C1 3,3µ D3 1N4448 R5 1k

D2 1N4448 C2 3,3µ R8 33k R11 10k

R13 680 R19 22k

IC 1

R14 150k C7 3,3µ R15 1k R12 10k R9 10k R4 10k

Q1 BC 107 Q2 BC 107

R6 1k

R26 10k C9 10µ R25 3,9k Q3 BC 177 D4 1N4448 Q4 BC 177

R20 470k SET DELAY TIME

R22 47k

IC 2

R7 330 C6 22µ C8 3,3µ

R21 1k R24 22k

D5 1N4448 Q5 BC 177

D6 1N4448 D7 1N4448

P5 org
P6 red
P7 blk

AUTO MANUAL

J3 8 7 6 5 4 3 2 1

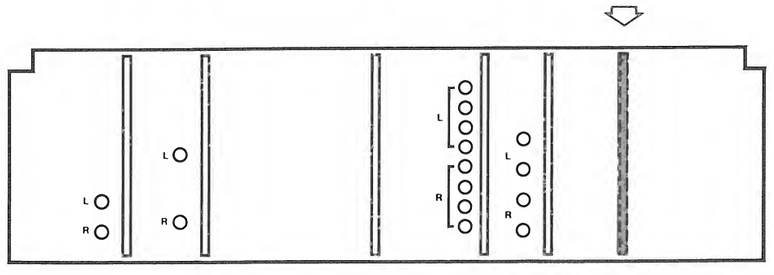
FROM LOCAL SWITCH BOARD 1.011.220

S-REC +24,0V S-STOP S-PLAY-D S-FORW S-REW S-PAUSE

J2 8 7 6 5 4 3 2 1

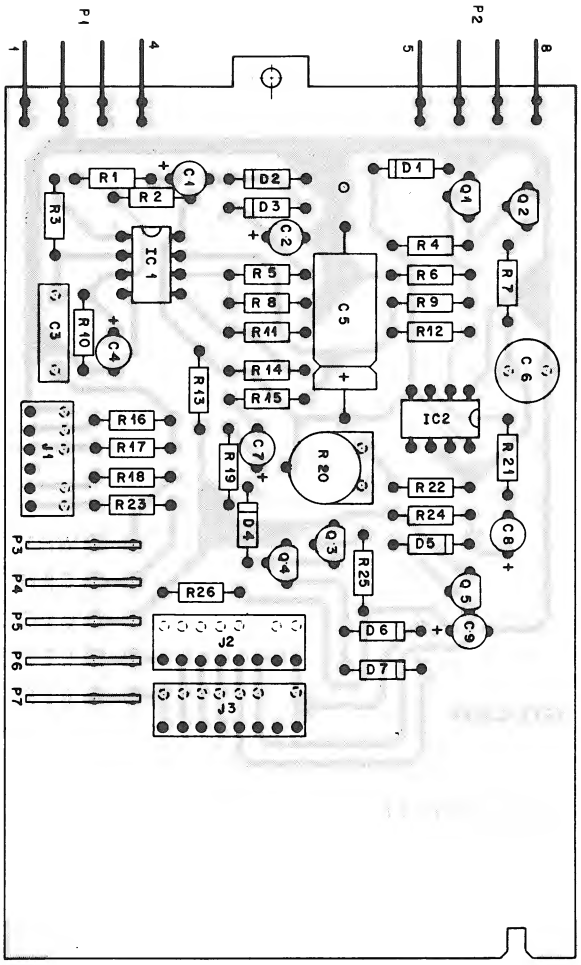
TO TAPE DRIVE CONTROL 1.177.315 (317)

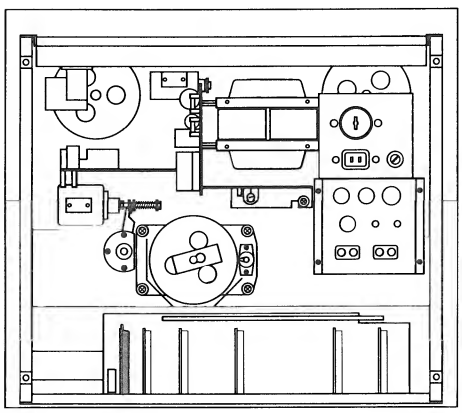
CIRCUIT 1.177.276
PC-BOARD 1.177.276-11



ADJUSTABLE BETWEEN APPROX. 0.5 ... 30 SEC
FACTORY ADJUSTED TO 5 SEC

STUDER REVOX	B77 AUTO
AUTO-START BOARD	
1.177.276	ED1 09.79


P1
P2
1
4
5
8
R1
R2
R3
C1
D2
D3
C2
IC 1
C3
R10
C4
R13
R5
R8
R11
R14
R15
C5
R 20
D1
Q1
Q2
R4
R6
R9
R12
R7
C 6
IC2
R21
C8
R22
R24
D5
Q3
R25
Q5
C9
D6
D7
R16
R17
R18
R23
J1
C7
R19
D4
Q4
R26
P3
P4
P5
P6
P7
J2
J3



IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	C 01	59.30.6339	3,3 µF	20% 35V TA	
	C 02	59.30.6339	3,3 µF	20% 35V TA	
	C 03	59.31.1104	0,1 µF	20% 100V MPETP	
	C 04	59.30.6339	3,3 µF	20% 35V TA	
	C 05	59.25.4101	100 µF	10% 25V EL	
	C 06	59.22.6220	22 µF	10% 40V EL	
	C 07	59.30.6339	3,3 µF	20% 35V TA	
	C 08	59.30.6339	3,3 µF	20% 35V TA	
	C 09	59.30.7100	10 µF	20% 20V TA	
	D 01	50.04.1119	15 V	5% .4W Z-Diode	
	D 2-7	50.04.0125	1N 4448		
	IC 01	50.05.0245	RC 4558	Lin RC 4558DN	
	IC 02	50.05.0158	NE 555	Lin MC 1455	
	J 01	54.01.0238	6-Pole	Cis	
	J 02	54.01.0262	8-Pole	Cis	
	J 03	54.01.0262	8-Pole	Cis	
	P 01	54.01.0470	4-Pole	Cis	
	P 02	54.01.0470	4-Pole	Cis	
	P 3-7	54.02.0328		Flach 2,8 x 0,8	
	Q 01	50.03.0436	BC 237	NPN BC 547	
	Q 02	50.03.0436	BC 237	NPN BC 547	
	Q 03	50.03.0317	BC 251	PNP BC 307	
	Q 04	50.03.0317	BC 251	PNP BC 307	

IND	DATE	NAME
④		
③		
②		
①		
○	11.1.79	R.Weibel/gv

STUDER	Auto-Start Board	1.177.276.00	PAGE 1 OF 2

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	Q 05	50.03.0317	BC 251	PNP BC 307	
	R 01	57.11.4332	3,3 k	5% .25W CSCH	
	R 02	57.11.4104	100 k		
	R 03	57.11.4224	220 k		
	R 04	57.11.4103	10 k		
	R 05	57.11.4102	1 k		
	R 06	57.11.4102	1 k		
	R 07	57.11.4331	330		
	R 08	57.11.4333	33 k		
	R 09	57.11.4103	10 k		
	R 10	57.11.4104	100 k		
	R 11	57.11.4103	10 k		
	R 12	57.11.4103	10 k		
	R 13	57.11.4681	680		
	R 14	57.11.4154	150 k		
	R 15	57.11.4102	1 k		
	R 16	57.11.4103	10 k		
	R 17	57.11.4103	10 k		
	R 18	57.11.4682	6,8 k		
	R 19	57.11.4223	22 k		
	R 20	58.02.5474	470 k	20% .1 W PLSCH	
	R 21	57.11.4102	1 k	5% .25W CSCH	
	R 22	57.11.4473	47 k		
	R 23	57.11.4682	6,8 k		
	R 24	57.11.4223	22 k		
	R 25	57.11.4392	3,9 k		
	R 26	57.11.4103	10 k		

IND	DATE	NAME
④		
③		
②		
①	11.1.79	R.Weibel/gv
○		

LEFT

+21.0V

7

R10 150k

R15 6,8k

+11V 1.2V

BC108B Q2

BC109C Q1

80 mV

9

У-REC-L

R2 10k

C9 3,3µ

R9 100k

R4 12k

C5 100µ

R6 1,5k

R5 820

C6 22p

C7 0,1µ

R39 2,7k

R8 39K

R7 22 K

C10 3,3µ

R40 22 K

R12 22k

EQ SLOW

EQ FAST

C2 2,7n

C1 6,8n

R13 22k

C11 1µ

REC LEVEL

R17 220k

R11 56k

+21.0V

R21 100k

Q4 BC108B

R20 220k

C14 47µ

R18 330

+11V

Q3 BC108B

R14 1K

C13 6,8n

R16 680

C15 10n

2,2m L2

BIAS TRAP

R19 1k

C12 3,3µ

L1

<350mV 150kHz

C16 470p

C17 3,3n

2

H-REC-L

REC-RELAY LEFT

BIAS

100

0.0V

10

S-EQF-L

6

S-EQS-L

5

330

RIGHT

+21.0V

R29 150k

R31 6,8k

BC108B Q6

BC109C Q5

8

У-REC-R

R1 10k

C8 3,3µ

R25 100k

R3 12k

C18 100µ

R26 1,5K

R24 820

C19 22p

C20 0,1µ

R41 2,7K

R23 39K

R22 22 K

C21 3,3µ

R42 22 K

R27 22k

EQ SLOW

EQ FAST

C4 2,7n

C3 6,8n

R28 22k

C22 1µ

REC LEVEL

R34 220k

R32 56k

R38 100k

Q8 BC108B

R37 220k

C25 47µ

R36 330

Q7. BC108B

R30 1K

C24 6,8n

R33 680

C26 10n

2,2m L4

BIAS TRAP

R35 1k

C23 3,3µ

L3

C27 470p

C28 3,3n

1

H-REC-R

REC-RELAY RIGHT

BIAS

100

S-EQF-R

4

S-EQS-R

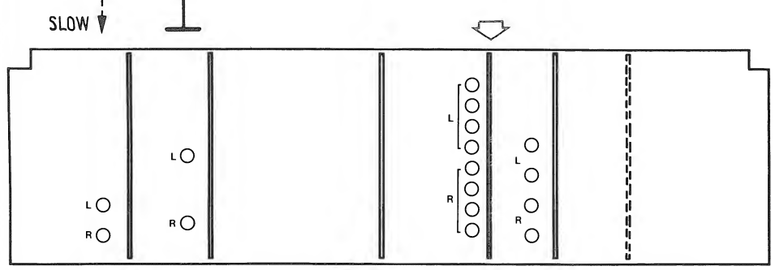
3

330

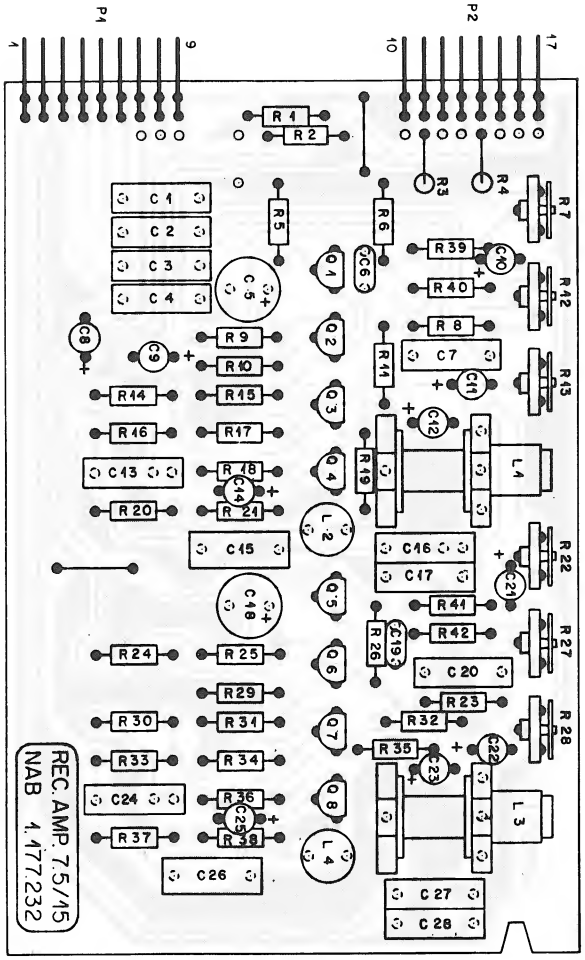
FAST

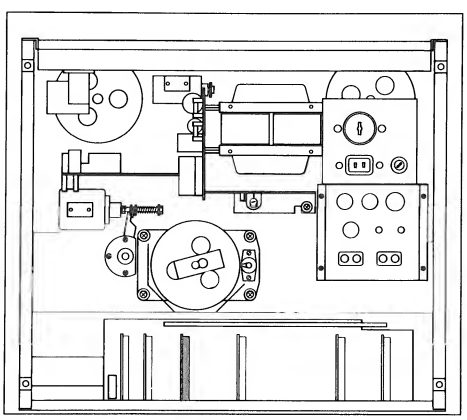
SLOW

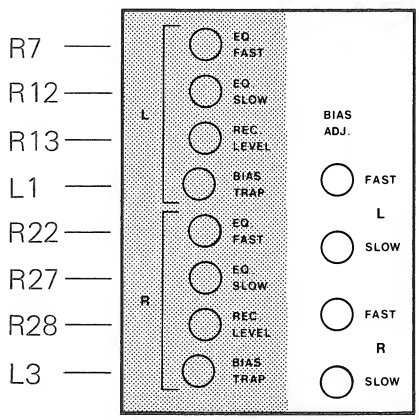
CIRCUIT 1.177.232
PC-BOARD 1.177.232-11



STUDER REVOX	B77 HS
RECORD AMPLIFIER	NAB 7 1/2–15"
1.177.232	ED1 09.79


P1
1
9
P2
10
17
R 1
R 2
R3
R4
R 7
R 12
R 13
C 1
C 2
C 3
C 4
C 5
R5
R6
C6.3
Q1
R 39
C10
R 40
C8
C9
R 9
R 10
Q2
R 8
C 7
C11
R11
R14
R15
Q3
C12
R 46
R 17
Q4
R19
L1
C13
R 18
C14
R 20
R 21
L2
C 15
C 16
C 17
R 22
C21
C 18
Q5
R 41
R 24
R 25
Q6
C19.3
R 26
R 42
R 27
C 20
R 29
R 23
R 30
R 31
Q7
R 32
R 28
R 33
R 34
R 35
C22
C23
C24
R 36
C25
Q8
L3
R 37
R 38
L4
C 26
C 27
C 28
REC. AMP. 7.5/15
NAB 1.177232




R7
R12
R13
L1
R22
R27
R28
L3
L
R
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
BIAS ADJ.
FAST
L
SLOW
FAST
R
SLOW

POS NO	PART NO	VALUE	SPECIFICATIONS			EQUIVALENT	MFR
C 01	59.11.3682	6800P	5%	400V	PC		
C 02	59.11.6272	2700P	5%	400V	PC		
C 03	59.11.3682	6800P	5%	400V	PC		
C 04	59.11.6272	2700P	5%	400V	PC		
C 05	59.22.3101	100 U	10%	12 V	EL		
C 06	59.32.0220	22 P	20%	500V	CER		
C 07	59.31.6104	0,1 U	10%	100V	MPETP		
C 08	59.30.6339	3,3 U	20%	35 V	TA		
C 09	59.30.6339	3,3 U	20%	35 V	TA		
C 10	59.30.6339	3,3 U	20%	35 V	TA		
C 11	59.30.6109	1 U	20%	35 V	TA		
C 12	59.30.6339	3,3 U	20%	35 V	TA		
C 13	59.11.3682	6800P	5%	400V	PC		
C 14	59.30.1470	47 U	20%	3 V	TA		
C 15	59.31.9103	0,01U	10%	100V	PETP		
C 16	59.11.6471	470 P	5%	400V	PC		
C 17	59.11.6332	3300P	5%	400V	PC		
C 18	59.22.3101	100 U	10%	12 V	EL		
C 19	59.32.0220	22 P	20%	500V	CER		
C 20	59.31.6104	0,1 U	10%	100	MPETP		
C 21	59.30.6339	3,3 U	20%	35 V	TA		
C 22	59.30.6109	1 U	20%	35 V	TA		
C 23	59.30.6339	3,3 U	20%	35 V	TA		
C 24	59.11.3682	6800P	5%	400V	PC		
C 25	59.30.1470	47 U	20%	3 V	TA		
C 26	59.31.9103	0,01U	10%	100V	PETP		
C 27	59.11.6471	470 P	5%	400V	PC		
C 28	59.11.6332	3300P	5%	400V	PC		
L 01	1.177.231.00						S
L 02	62.02.1222	2,2 mH	5%				
L 03	1.177.231.00						S
L 04	62.02.1222	2,2 mH	5%				
P 01	54.01.0220	9 - Pole	Pin-Strip		AMP		
P 02	54.01.0270	8 - Pole	Pin-Strip		AMP		
Q 01	50.03.0439	BC 109 C			NPN		any
Q 02	50.03.0436	BC 107 B			NPN		any
Q 03	50.03.0436	BC 107 B			NPN		any
Q 04	50.03.0436	BC 107 B			NPN		any
Q 05	50.03.0439	BC 109 C			NPN		any
Q 06	50.03.0436	BC 107 B			NPN		any

PC = Polycarbonate
MPETP=Metallized Polyester
PETP=Polyester
CER=Ceramic
S = Studer

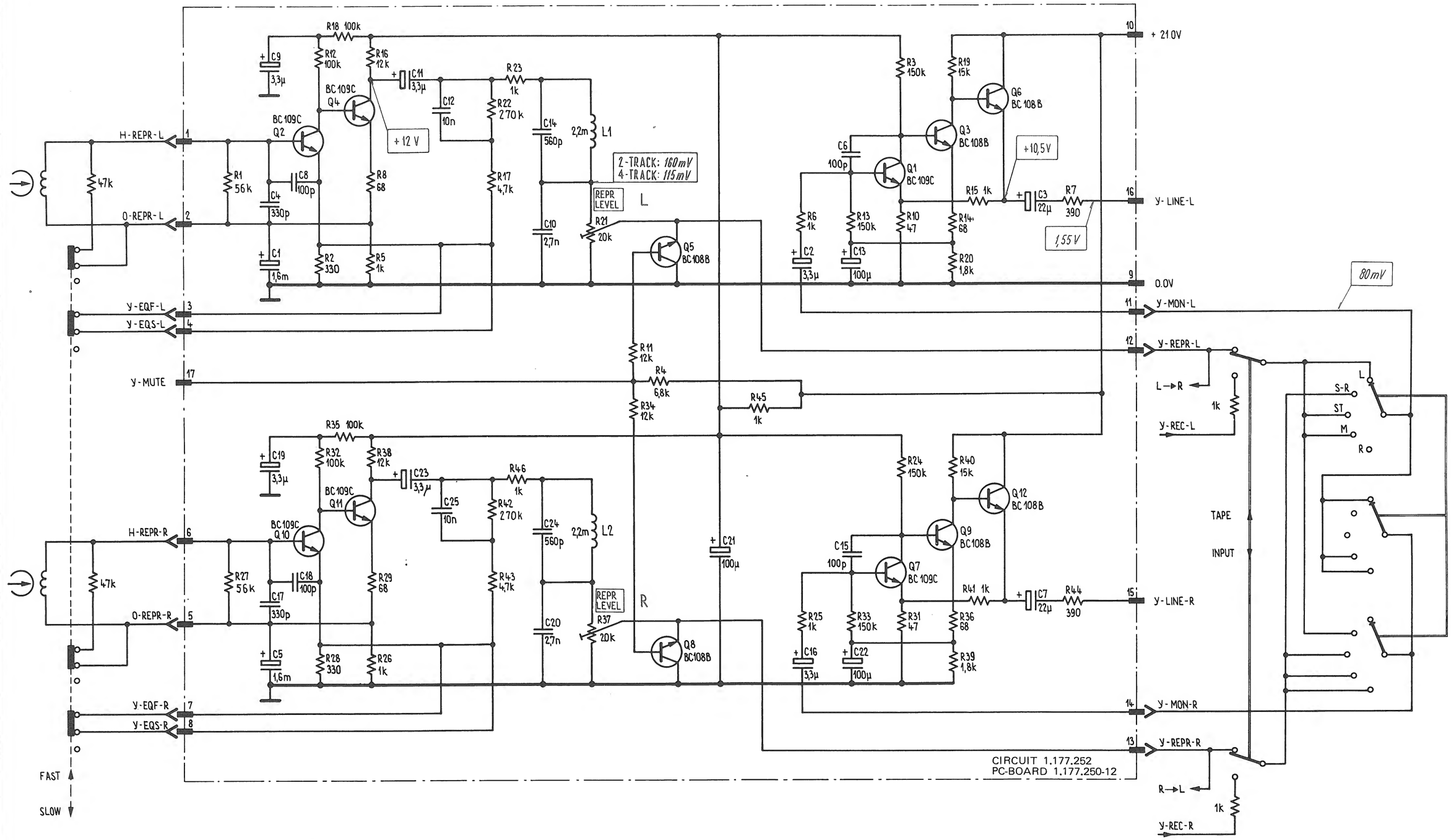
IND	DATE	NAME
④		
③		
②		
①		
○	19.4.78	Fol./gv

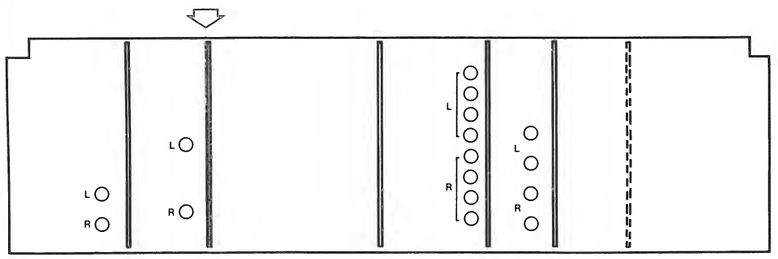
STUDER	Record Amplifier NAB 7½-15	1.177.232-00	PAGE 1 of 2

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
Q 07	50.03.0436	BC 107 B	NPN		any
Q 08	50.03.0436	BC 107 B	NPN		any
R 01	57.11.4103	10 k	5% .25W CF		
R 02	57.11.4103	10 k	5% .25W CF		
R 03	57.11.4123	12 k	5% .12W CF		
R 04	57.11.4123	12 k	5% .12W CF		
R 05	57.41.4821	820	5% .25W CF		
R 06	57.41.4332	3,3 k	5% .25W CF		
R 07	58.02.4223	22 k	10% .1 W PCF		
R 08	57.41.4393	39 k	5% .25W CF		
R 09	57.41.4104	100 k			
R 10	57.41.4154	150 k			
R 11	57.41.4563	56 k			
R 12	58.02.4223	22 k	10% .1 W PCF		
R 13	58.02.4223	22 k	10% .1 W PCF		
R 14	57.41.4102	1 k	5% .25W CF		
R 15	57.41.4682	6,8 k			
R 16	57.41.4681	680			
R 17	57.41.4224	220 k			
R 18	57.41.4331	330			
R 19	57.41.4102	1 k			
R 20	57.41.4224	220 k			
R 21	57.41.4104	100 k			
R 22	58.02.4223	22 k	10% .1 W PCF		
R 23	57.41.4393	39 k	5% .25W CF		
R 24	57.41.4821	820			
R 25	57.41.4104	100 k			
R 26	57.41.4332	3,3 k			
R 27	58.02.4223	22 k	10% .1 W CF		
R 28	58.02.4223	22 k	10% .1 W CF		
R 29	57.41.4154	150 k	5% .25W CF		
R 30	57.41.4102	1 k			
R 31	57.41.4682	6,8 k			
R 32	57.41.4563	56 k			
R 33	57.41.4681	680			
R 34	57.41.4224	220 k			
R 35	57.41.4102	1 k			
R 36	57.41.4331	330			
R 37	57.41.4224	220 k			
R 38	57.41.4104	100 k			
R 39	57.41.4272	2,7 k			
R 40	57.41.4223	22 k			
R 41	57.41.4272	2,7 k			
R 42	57.41.4223	22 k			

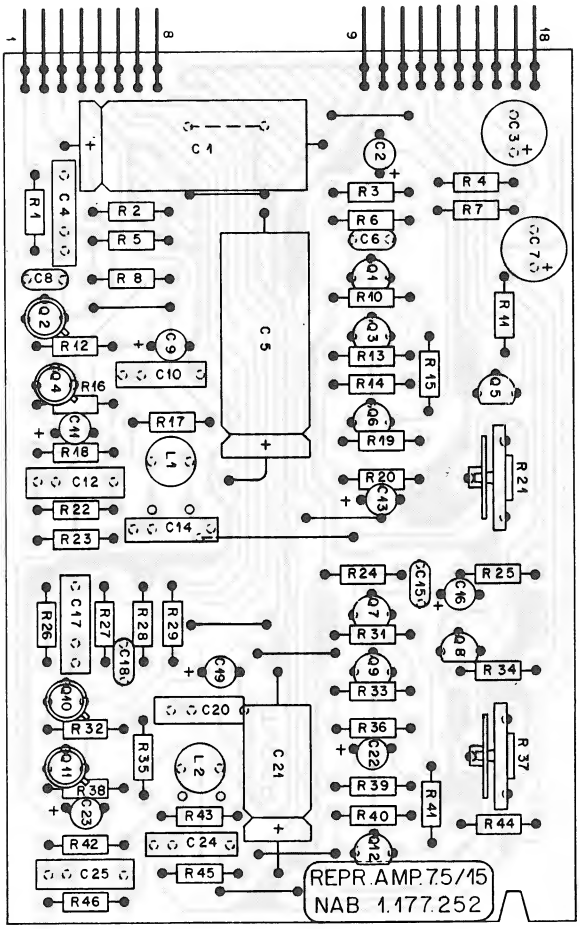
CF=Carbon Film

IND	DATE	NAME
④		
③		
②		
①		
○	19.4.78	Fol./gv





STUDER REVOX	B77 HS
REPRODUCE AMPLIFIER	NAB 7 1/2–15 "
1.177.252	ED1 09.79


1
8
9
18
C 1
C 2
C 3
C 4
C 5
C 6
C 7
C8
C 9
C 10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25
R1
R 2
R 3
R 4
R 5
R 6
R 7
R 8
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R31
R32
R33
R34
R35
R36
R37
R38
R39
R40
R41
R42
R43
R44
R45
R46
Q1
Q2
Q3
Q4
Q5
Q6
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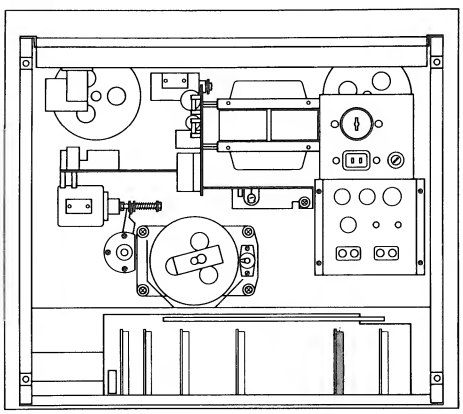
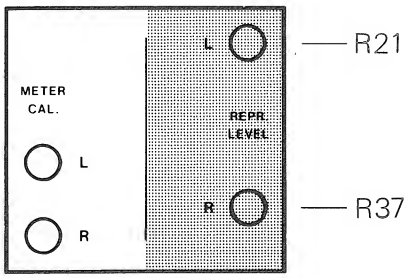
Q8
Q9
Q10
Q11
Q12
L1
L2
REPR.AMP.7.5/15
NAB 1.177.252




METER
CAL.
L
R
REPR.
LEVEL
L
R
R21
R37

POS NO	PART NO	VALUE	SPECIFICATIONS			EQUIVALENT	MFR
C 01	59.25.0162	1600U	10%	3V	EL		
C 02	59.30.6339	3,3U	20%	35V	TA		
C 03	59.22.6220	22U	10%	40V	EL		
C 04	59.11.6221	220P	5%	400V	PC		
C 05	59.25.0162	1600U	10%	3V	EL		
C 06	59.32.0101	100P	20%	500V	CER		
C 07	59.22.6220	22U	10%	40V	EL		
C 08	59.32.0101	100P	20%	500V	CER		
C 09	59.30.6339	3,3U	20%	35V	TA		
C 10	59.99.0259	2700P	10%	50V	PETP		
C 11	59.30.6339	3,3U	20%	35V	TA		
C 12	59.11.3103	0,01U	5%	160V	PC		
C 13	59.30.1101	100U	20%	3V	TA		
C 14	59.11.6561	560P	5%	400V	PC		
C 15	59.32.0101	100P	20%	500V	CER		
C 16	59.30.6339	3,3U	20%	35V	TA		
C 17	59.11.6221	220P	5%	400V	PC		
C 18	59.32.0101	100P	20%	500V	CER		
C 19	59.30.6339	3,3U	20%	35V	TA		
C 20	59.99.0259	2700P	10%	400V	PETP		
C 21	59.25.4101	100U	10%	25V	EL		
C 22	59.30.1101	100U	20%	3V	TA		
C 23	59.30.6339	3,3U	20%	35V	TA		
C 24	59.11.6561	560P	5%	400V	PC		
C 25	59.11.3101	0,01U	5%	160V	PC		
L 01	62.02.1222	2.2 mH	5%				
L 02	62.02.1222	2.2 mH	5%				
P 01	54.01.0270	8-Pole	Pin-Strip		AMP		
P 02	54.01.0271	10-Pole	Pin-Strip		AMP		
Q 01	50.03.0439	BC109C			NPN		any
Q 02	50.03.0407	BC109C	TO18		NPN		
Q 03	50.03.0436	BC107B			NPN		
Q 04	50.03.0407	BC109C	TO18		NPN		
Q 05	50.03.0436	BC107B			NPN		
Q 06	50.03.0436	BC107B			NPN		
Q 07	50.03.0439	BC109C			NPN		
Q 08	50.03.0436	BC107B			NPN		
Q 09	50.03.0436	BC107B			NPN		
Q 10	50.03.0407	BC109C	TO18		NPN		
Q 11	50.03.0407	BC109C	TO18		NPN		
Q 12	50.03.0436	BC107B			NPN		

EL = Electrolytic
PC = Polycarbonate
TA = Tantalum
CER = Ceramic
PETP= Polyester

IND	DATE	NAME
④ ③ ② ① ○	3.7.78	Lu./gv

STUDER	Reproduce-Amplifier 7½-15NAB	1.177.252	PAGE 1 of 2

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT MFR
R 01	57.41.4563	56 k	5% .25W CF	
R 02	57.41.4331	330		
R 03	57.41.4154	150 k		
R 04	57.41.4682	6,8 k		
R 05	57.41.4102	1 k		
R 06	57.41.4102	1 k		
R 07	57.41.4391	390		
R 08	57.41.4680	68		
R 10	57.41.4470	47		
R 11	57.41.4123	12 k		
R 12	57.11.4104	100 k		
R 13	57.41.4154	150 k		
R 14	57.41.4680	68		
R 15	57.41.4102	1 k		
R 16	57.11.4123	12 k		
R 17	57.41.4472	4,7 k		
R 18	57.41.4104	100 k		
R 19	57.41.4153	15 k		
R 20	57.41.4182	1,8 k		
R 21	58.19.0203	20 k	20% .15Wlin.PCF	
R 22	57.41.4274	270 k	5% .25W CF	
R 23	57.41.4102	1 k		
R 24	57.41.4154	150 k		
R 25	57.41.4102	1 k		
R 26	57.41.4102	1 k		
R 27	57.41.4563	56 k		
R 28	57.41.4331	330		
R 29	57.41.4680	68		
R 31	57.41.4470	47		
R 32	57.11.4104	100 k		
R 33	57.41.4154	150 k		
R 34	57.41.4123	12 k		
R 35	57.41.4104	100 k		
R 36	57.41.4680	68		
R 37	58.19.0203	20 k	20% .15Wlin.PCF	
R 38	57.11.4123	12 k	5% .25W CF	
R 39	57.41.4182	1,8 k		
R 40	57.41.4153	15 k		
R 41	57.41.4102	1 k		
R 42	57.41.4274	270 k		
R 43	57.41.4472	4,7 k		
R 44	57.41.4391	390		
R 45	57.41.4102	1 k		
R 46	57.41.4102	1 k		

CF = Carbon Film
PCF = Pot.Carbon Film

IND	DATE	NAME
④ ③ ② ① ○	3.7.78	Lu./gv

LEFT

+21.0V 7

+21.0V

R10 150k

R15 6,8k

+11V 1,2V

R21 100k

Q4 BC 108B

BIAS TRAP

+11V

R17 220k

R20 220k

+ C14 47µ

R18 330

80 mV

BC108B Q2

BC 109C Q1

+ C10 3,3µ

C11 + 1µ

R13 22k

REC LEVEL

R19 1k

+ C12 3,3µ

L1

2

H-REC-L

REC-RELAY LEFT

Y-REC-L 9

R2 10k

C9 3,3µ +

R9 100k

C6 22p

R12 22k

R7 22k

EQ SLOW

EQ FAST

Q3 BC 108B

< 350mV 150kHz

C16 470p

BIAS

R4 12k

+ C5 100µ

R6 1,5k

R5 820

C2 3,3n

C1 2,7n

R11 56k

R16 680

C15 10n

2,2m L2

C17 3,3n

100

0.0V 10

S-EQF-L 6

S-EQS-L 5

330

RIGHT

+21.0V

R29 150k

R31 6,8k

R38 100k

Q8 BC 108B

BIAS TRAP

R34 220k

R37 220k

+ C25 47µ

R36 330

C21 3,3µ

BC108B Q6

BC109C Q5

R28 22k

C22 + 1µ

REC LEVEL

R35 1k

+ C23 3,3µ

L3

1

H-REC-R

REC-RELAY RIGHT

Y-REC-R 8

R1 10k

C8 3,3µ +

R25 100k

C19 22p

R27 22k

R22 22k

EQ SLOW

EQ FAST

Q7 BC 108B

C27 470p

BIAS

R32 56k

R33 680

C28 3,3n

R3 12k

+ C18 100µ

R26 1,5K

R24 820

C4 3,3n

C3 2,7n

C26 10n

2,2m L4

100

S-EQF-R 4

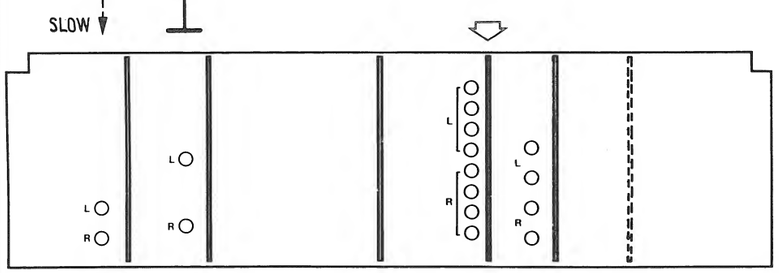
S-EQS-R 3

330

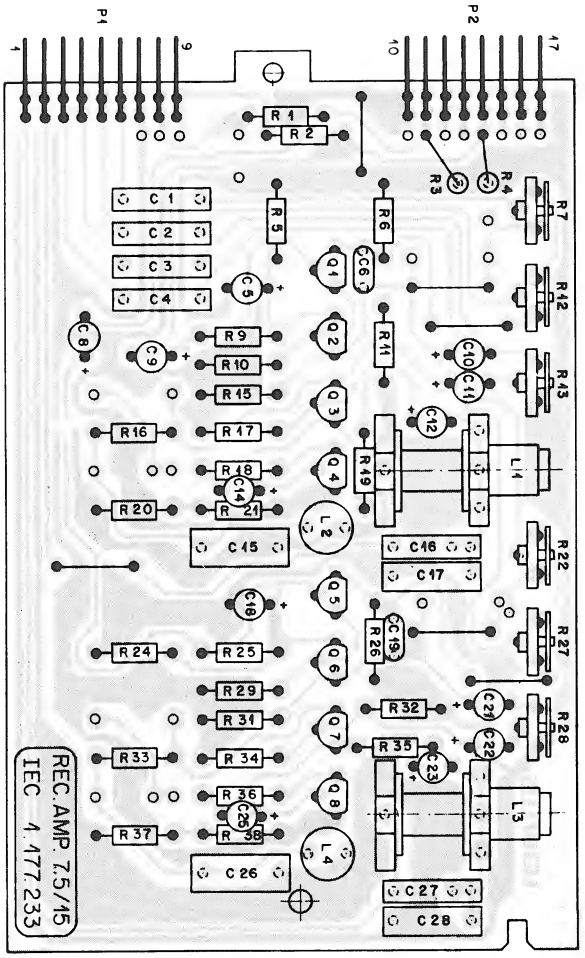
FAST

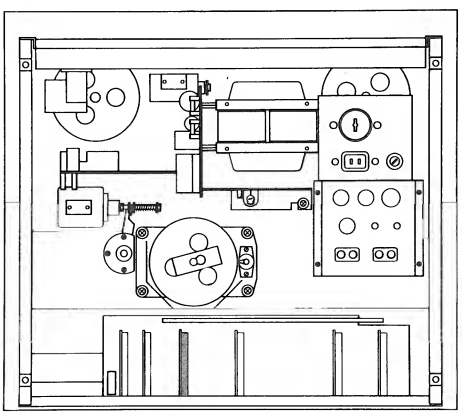
SLOW

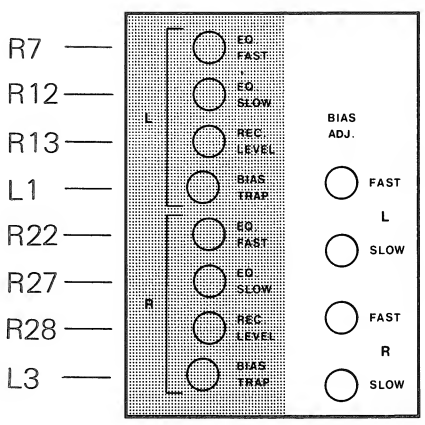
CIRCUIT 1.177.233
PC-BOARD 1.177.230-11



STUDER REVOX	B77 HS
RECORD AMPLIFIER IEC 7 1/2–15"	
1.177.233	ED1 09.79


P1
P2
1
9
10
17
R 1
R 2
R3
R4
C 1
C 2
C 3
C 4
R5
R6
CC6
C5
Q1
R7
R12
C8
C9
R9
R10
R15
Q2
R11
C10
C11
R13
C12
Q3
R16
R17
R18
C14
R 21
R20
Q4
R19
L1
L2
C 15
C16
C17
R22
C18
Q5
CC19
R26
R27
R24
R25
Q6
R29
R31
R32
C21
R28
C22
R35
C23
Q7
R33
R34
R36
C25
R 38
R37
Q8
L3
L4
C 26
C 27
C 28
REC.AMP. 7.5/15
IEC 4.177.233




R7
R12
R13
L1
R22
R27
R28
L3
L
R
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
BIAS ADJ.
FAST
L
SLOW
FAST
R
SLOW

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
C 01	59.11.6272	2700P	5% 400V	PC	
C 02	59.11.6272	2700P			
C 03	59.11.6272	2700P			
C 04	59.11.6272	2700P			
C 05	59.22.3101	100 U	10% 12V	EL	
C 06	59.32.0220	22 P	20% 500V	CER	
C 07					
C 08	59.30.6339	3,3 U	20% 35V	TA	
C 09	59.30.6339	3,3 U			
C 10	59.30.6339	3,3 U			
C 11	59.30.6109	1 U			
C 12	59.30.6339	3,3 U			
C 13					
C 14	59.30.1470	47 U	20% 3V	TA	
C 15	59.31.9103	0,01U	10% 100V	PETP	
C 16	59.11.6471	470 P	5% 400V	PC	
C 17	59.11.6332	3300P	5% 400V	PC	
C 18	59.22.3101	100 U	10% 12V	EL	
C 19	59.32.0220	22 P	20% 500V	CER	
C 20					
C 21	59.30.6339	3,3 U	20% 35V	TA	
C 22	59.30.6109	1 U			
C 23	59.30.6339	3,3 U			
C 24					
C 25	59.30.1470	47 U	20% 3V	TA	
C 26	59.31.9103	0,01U	10% 100V	PETP	
C 27	59.11.6471	470 P	5% 400V	PC	
C 28	59.11.6332	3300P	5% 400V	PC	
L 01	1.177.231.00				S
L 02	62.02.1222	2,2 mH	5%		
L 03	1.177.231.00				S
L 04	62.02.1222	2,2 mH	5%		
P 01	54.01.0220	9-Pole	Pin-Strip	AMP	
P 02	54.01.0270	8-Pole	Pin-Strip	AMP	
Q 01	50.03.0439	BC 109 C		NPN	any
Q 02	50.03.0436	BC 107 B		NPN	any
Q 03	50.03.0436	BC 107 B		NPN	any
Q 04	50.03.0436	BC 107 B		NPN	any
Q 05	50.03.0439	BC 109 C		NPN	any
Q 06	50.03.0436	BC 107 B		NPN	any
Q 07	50.03.0436	BC 107 B		NPN	any
Q 08	50.03.0436	BC 107 B		NPN	any

PC = Polycarbonate
PETP= Polyester
CER = Ceramic

S = STUDER

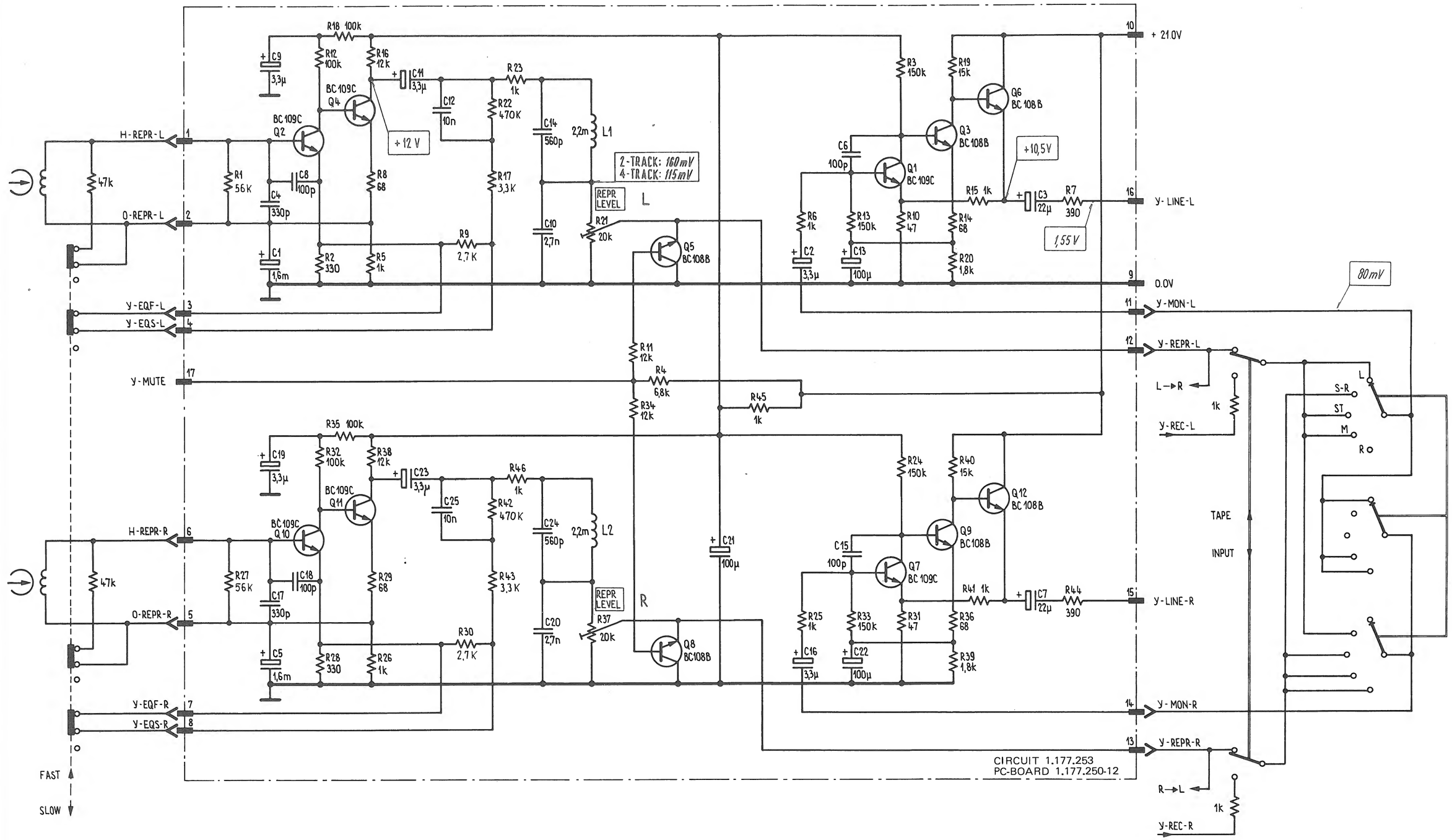
IND	DATE	NAME
④ ③ ② ① ○	19.4.78	Fol./gv

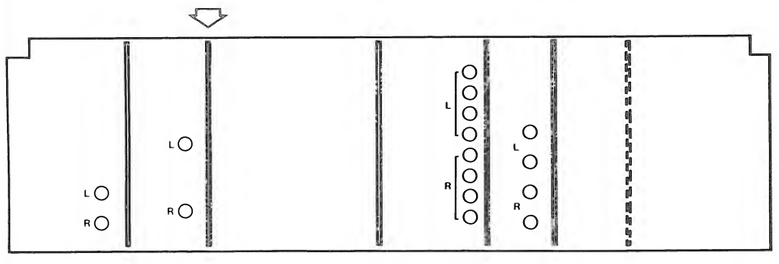
STUDER	Record Amplifier IEC 7½-15"	1.177.233-00	PAGE 1 of 2

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT MFR
R 01	57.11.4103	10 k	5% .25W CF	
R 02	57.11.4103	10 k		
R 03	57.11.4123	12 k	.12W	
R 04	57.11.4123	12 k		
R 05	57.41.4821	820	5% .25W CF	
R 06	57.41.4152	1,5 k		
R 07	58.02.4223	22 k	10% .1 W CF	
R 08				
R 09	57.41.4104	100 k	5% .25W CF	
R 10	57.41.4154	150 k		
R 11	57.41.4563	56 k		
R 12	58.02.4223	22 k	10% .1 W CF	
R 13	58.02.4223	22 k		
R 14				
R 15	57.41.4682	6,8 k	5% .25W CF	
R 16	57.41.4681	680		
R 17	57.41.4224	220 k		
R 18	57.41.4331	330		
R 19	57.41.4102	1 k		
R 20	57.41.4224	220 k		
R 21	57.41.4104	100 k		
R 22	58.02.4223	22 k	10% .1 W CF	
R 23				
R 24	57.41.4821	820	5% .25W CF	
R 25	57.41.4104	100 k		
R 26	57.41.4152	1,5 k		
R 27	58.02.4223	22 k	10% .1 W CF	
R 28	58.02.4223	22 k		
R 29	57.41.4154	150 k	5% .25W CF	
R 30				
R 31	57.41.4682	6,8 k		
R 32	57.41.4563	56 k		
R 33	57.41.4681	680		
R 34	57.41.4224	220 k		
R 35	57.41.4102	1 k		
R 36	57.41.4331	330		
R 37	57.41.4224	220 k		
R 38	57.41.4104	100 k		

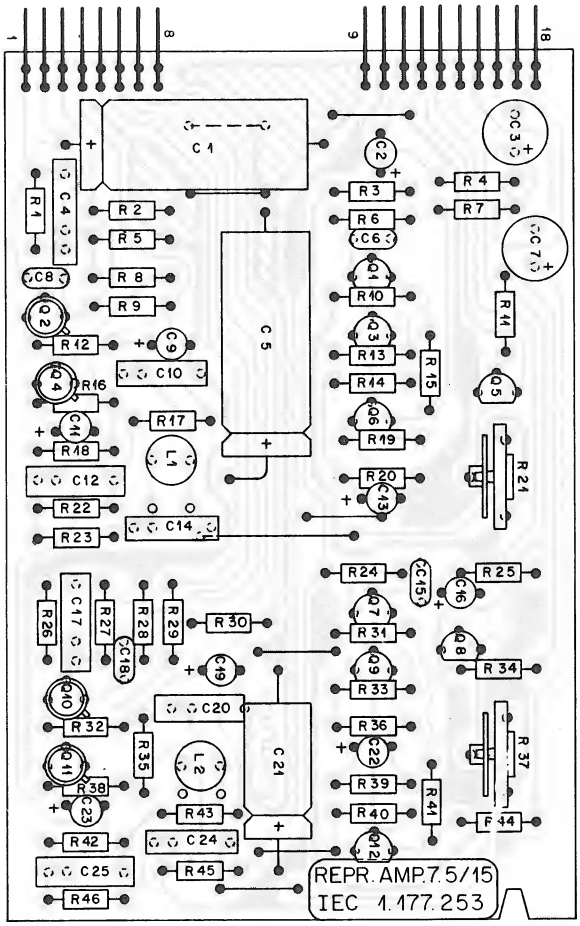
CF = Carbon Film

IND	DATE	NAME
④ ③ ② ① ○	19.4.78	Fol./gv





STUDER REVOX	B77 HS
REPRODUCE AMPLIFIER IEC 7 1/2–15"	
1.177.253	ED1 09.79


1
8
9
18
C 1
C 2
C 3
C 4
C 5
C 6
C 7
C8
C 9
C 10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25
R 1
R 2
R 3
R 4
R 5
R 6
R 7
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R 9
R10
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R12
R13
R14
R15
R16
R17
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R20
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R34
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R37
R38
R39
R40
R41
R42
R43
R44
R45
R46
Q1
Q2
Q3
Q4
Q5
Q6
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Q8
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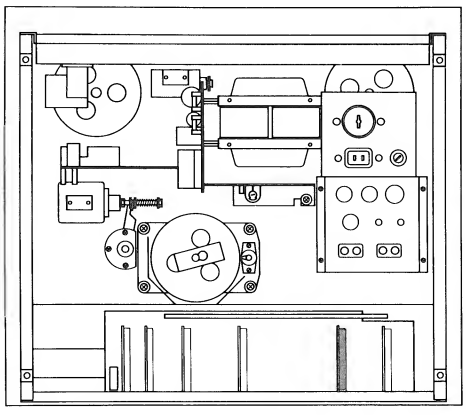
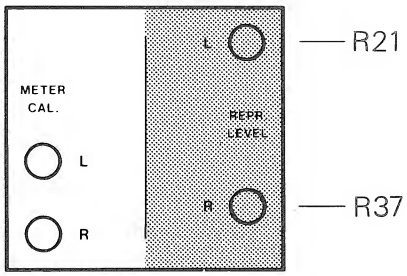
Q10
Q11
Q12
L1
L2
REPR. AMP. 7.5/15
IEC 1.177.253




METER
CAL.
L
R
REPR.
LEVEL
L
R
R21
R37

POS NO	PART NO	VALUE	SPECIFICATIONS		EQUIVALENT	MFR
C 01	59.25.0162	1600U	10%	3V	EL	
C 02	59.30.6339	3,3U	20%	35V	TA	
C 03	59.22.6220	22U	10%	40V	EL	
C 04	59.11.6221	220P	5%	400V	PC	
C 05	59.25.0162	1600U	10%	3V	EL	
C 06	59.32.0101	100P	20%	500V	CER	
C 07	59.22.6220	22U	10%	40V	EL	
C 08	59.32.0101	100P	20%	500V	CER	
C 09	59.30.6339	3,3U	20%	35V	TA	
C 10	59.99.0259	2700P	10%	50V	PETP	
C 11	59.30.6339	3,3U	20%	35V	TA	
C 12	59.11.3103	0,01U	5%	160V	PC	
C 13	59.30.1101	100U	20%	3V	TA	
C 14	59.11.6561	560P	5%	400V	PC	
C 15	59.32.0101	100P	20%	500V	CER	
C 16	59.30.6339	3,3U	20%	35V	TA	
C 17	59.11.6221	220P	5%	400V	PC	
C 18	59.32.0101	100P	20%	500V	CER	
C 19	59.30.6339	3,3U	20%	35V	TA	
C 20	59.99.0259	2700P	10%	400V	PETP	
C 21	59.25.4101	100U	10%	25V	EL	
C 22	59.30.1101	100U	20%	3V	TA	
C 23	59.30.6339	3,3U	20%	35V	TA	
C 24	59.11.6561	560P	5%	400V	PC	
C 25	59.11.3101	0,01U	5%	160V	PC	
L 01	62.02.1222	2.2 mH	5%			
L 02	62.02.1222	2.2 mH	5%			
P 01	54.01.0270	8-Pole	Pin-Strip		AMP	
P 02	54.01.0271	10-Pole	Pin-Strip		AMP	
Q 01	50.03.0439	BC109C			NPN	any
Q 02	50.03.0407	BC109C	TO18		NPN	
Q 03	50.03.0436	BC107B			NPN	
Q 04	50.03.0407	BC109C	TO18		NPN	
Q 05	50.03.0436	BC107B			NPN	
Q 06	50.03.0436	BC107B			NPN	
Q 07	50.03.0439	BC109C			NPN	
Q 08	50.03.0436	BC107B			NPN	
Q 09	50.03.0436	BC107B			NPN	
Q 10	50.03.0407	BC109C	TO18		NPN	
Q 11	50.03.0407	BC109C	TO18		NPN	
Q 12	50.03.0436	BC107B			NPN	

EL = Electrolytic
PC = Polycarbonate
TA = Tantalum
CER = Ceramic
PETP= Polyester

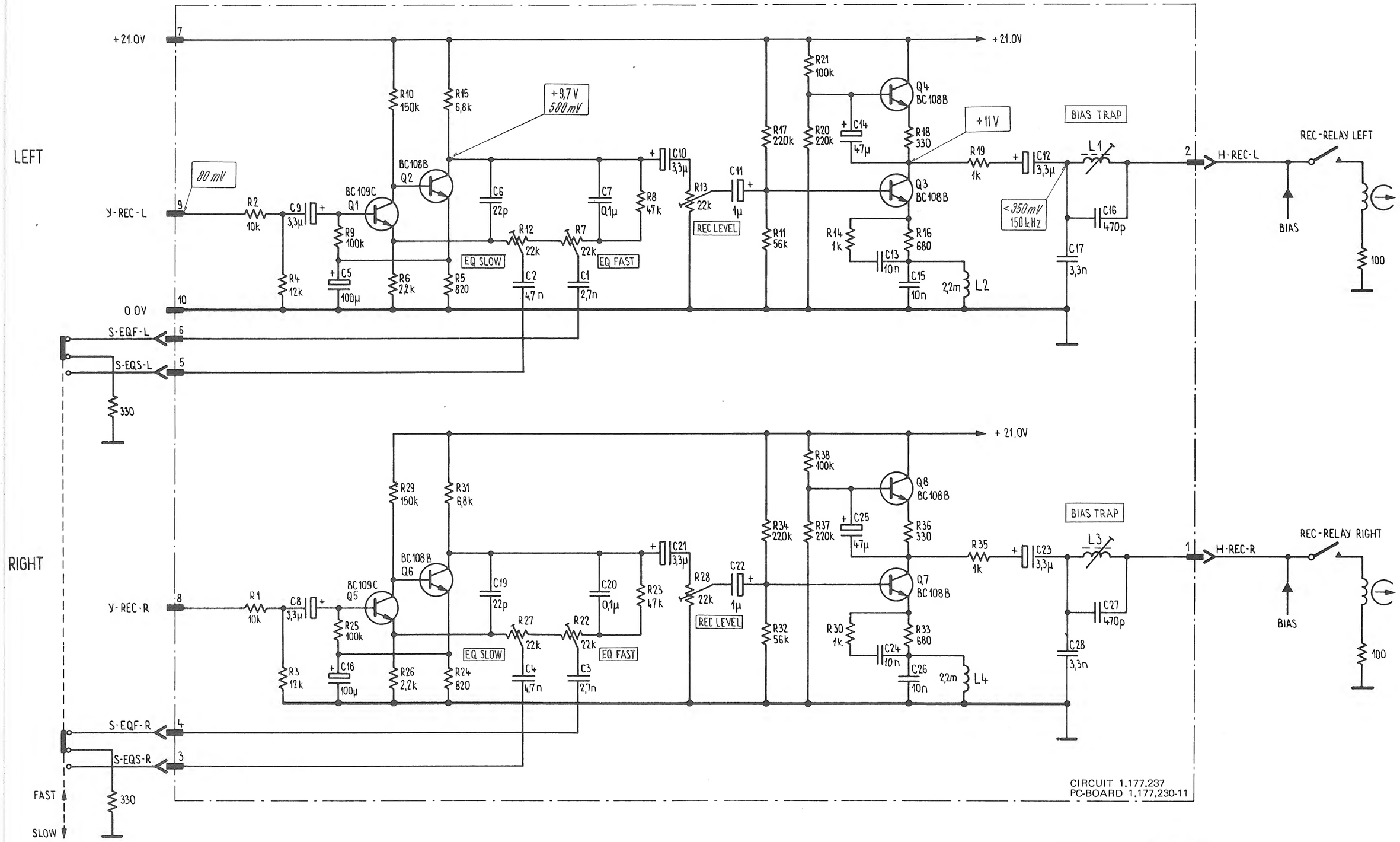
IND	DATE	NAME
④ ③ ② ① ○	4.7.78	Lu./gv

STUDER	Reproduce-Amplifier 7½-15' IEC	1.177.253	PAGE 1 of 2

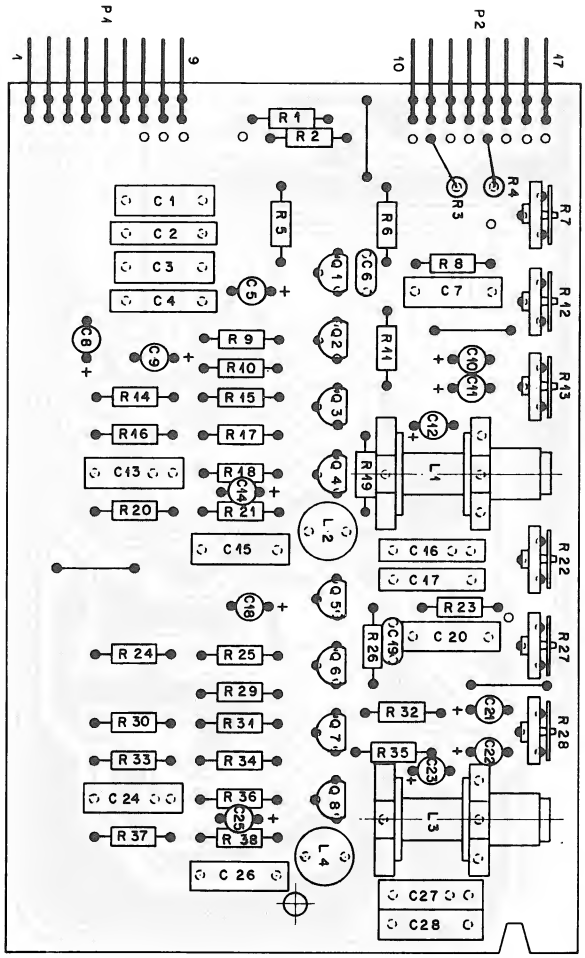
POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT MFR
R 01	57.41.4563	56 k	5% .25W CF	
R 02	57.41.4331	330		
R 03	57.41.4154	150 k		
R 04	57.41.4682	6,8 k		
R 05	57.41.4102	1 k		
R 06	57.41.4102	1 k		
R 07	57.41.4391	390		
R 08	57.41.4680	68		
R 09	57.41.4272	2,7 k		
R 10	57.41.4470	47		
R 11	57.41.4123	12 k		
R 12	57.11.4104	100 k		
R 13	57.41.4154	150 k		
R 14	57.41.4680	68		
R 15	57.41.4102	1 k		
R 16	57.11.4123	12 k		
R 17	57.41.4332	3,3 k		
R 18	57.41.4104	100 k		
R 19	57.41.4153	15 k		
R 20	57.41.4182	1,8 k		
R 21	58.19.0203	20 k	20% .15Wlin.PCF	
R 22	57.41.4474	470 k	5% .25W CF	
R 23	57.41.4102	1 k		
R 24	57.41.4154	150 k		
R 25	57.41.4102	1 k		
R 26	57.41.4102	1 k		
R 27	57.41.4563	56 k		
R 28	57.41.4331	330		
R 29	57.41.4680	68		
R 30	57.41.4272	2,7 k		
R 31	57.41.4470	47		
R 32	57.11.4104	100 k		
R 33	57.41.4154	150 k		
R 34	57.41.4123	12 k		
R 35	57.41.4104	100 k		
R 36	57.41.4680	68		
R 37	58.19.0203	20 k	20% .15Wlin.PCF	
R 38	57.11.4123	12 k	5% .25W CF	
R 39	57.41.4182	1,8 k		
R 40	57.41.4153	15 k		
R 41	57.41.4102	1 k		
R 42	57.41.4474	470 k		
R 43	57.41.4332	3,3 k		
R 44	57.41.4391	390		
R 45	57.41.4102	1 k		
R 46	57.41.4102	1 k		

CF = Carbon Film
PCF = Pot.Carbon Film

IND	DATE	NAME
④ ③ ② ① ○	4.7.78	Lu./gv



STUDER REVOX	B77 LS
RECORD AMPLIFIER NAB 1 7/8–3 3/4"	
1.177.237	ED1 09.79


P1
P2
1
9
10
17
R1
R2
R3
R4
R5
R6
R7
R8
R9
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R12
R13
R14
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R27
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R37
R38
C1
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C10
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C15
C16
C17
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C19
C20
C21
C22
C23
C24
C25
C26
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Q4
Q5
Q6
Q7
Q8
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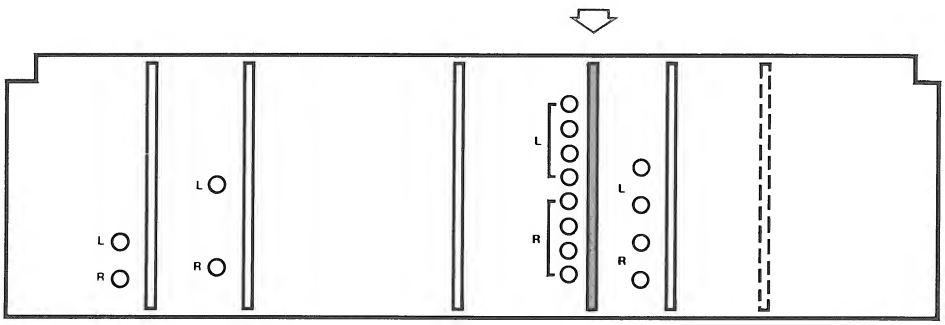
L2
L3
L4


L
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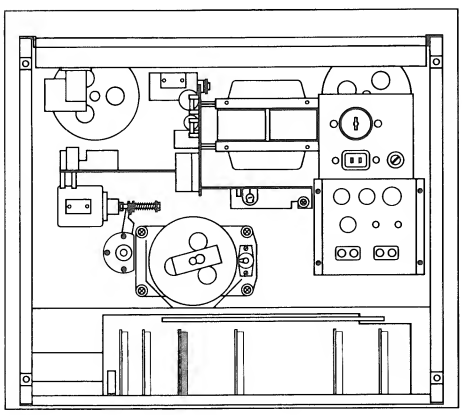
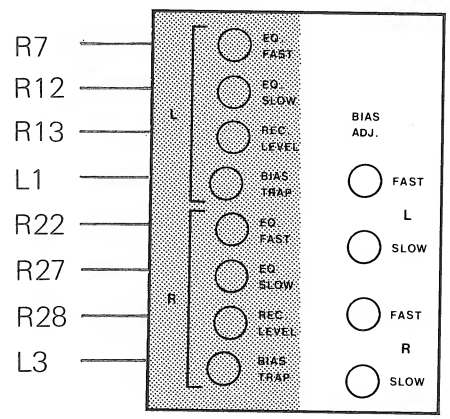
L
R
L
R
L
R




R7
R12
R13
L1
R22
R27
R28
L3
L
R
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
BIAS ADJ.
FAST
SLOW
FAST
SLOW

POS NO	PART NO	VALUE	SPECIFICATIONS			EQUIVALENT MFR
C 01	59.11.6272	2700 P	5%	400V	PC	
C 02	59.11.4472	4700 P	2,5%		PC	
C 03	59.11.6272	2700 P	5%	400V	PC	
C 04	59.11.4472	4700 P	2,5%		PC	
C 05	59.22.3101	100 U	10%	12V	EL	
C 06	59.32.0220	22 P	20%	500V	CER	
C 07	59.31.6104	0,1 U	10%	100V	MPETP	
C 08	59.30.6339	3,3 U	20%	35V	TA	
C 09	59.30.6339	3,3 U				
C 10	59.30.6339	3,3 U				
C 11	59.30.6109	1 U				
C 12	59.30.6339	3,3 U				
C 13	59.11.3103	0,01 U	5%	160V	PETP	
C 14	59.30.1470	47 U	20%	3V	TA	
C 15	59.11.3103	0,01 U	5%	160V	PETP	
C 16	59.11.6471	470 P	5%	400V	PC	
C 17	59.11.6332	3300 P				
C 18	59.22.3101	100 U	10%	12V	EL	
C 19	59.32.0220	22 P	20%	500V	CER	
C 20	59.31.6104	0,1 U	10%	100V	MPETP	
C 21	59.30.6339	3,3 U	20%	35V	TA	
C 22	59.30.6109	1 U				
C 23	59.30.6339	3,3 U				
C 24	59.11.3103	0,01 U	5%	160V	PETP	
C 25	59.30.1470	47 U	20%	3V	TA	
C 26	59.11.3103	0,01 U	5%	160V	PETP	
C 27	59.11.6471	470 P	5%	400V	PC	
C 28	59.11.6332	3300 P	5%	400V	PC	
L 01	1.177.231.00					S
L 02	62.02.1222	2,2 mH	5%			
L 03	1.177.231.00					S
L 04	62.02.1222	2,2 mH				
P 01	54.01.0220	9-Pole	Pin-Strip		AMP	
P 02	54.01.0270	8-Pole	Pin-Strip		AMP	
Q 01	50.03.0439	BC109C			NPN	any
Q 02	50.03.0436	BC107B			NPN	any
Q 03	50.03.0436	BC107B			NPN	any
Q 04	50.03.0436	BC107B			NPN	any
Q 05	50.03.0439	BC109C			NPN	any
Q 06	50.03.0436	BC107B			NPN	any
Q 07	50.03.0436	BC107B			NPN	any

PC = Polycarbonate
CER = Ceramic
PETP = Polyester
MPETP = Metallized Polyester
S = Studer

④
③
②
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○

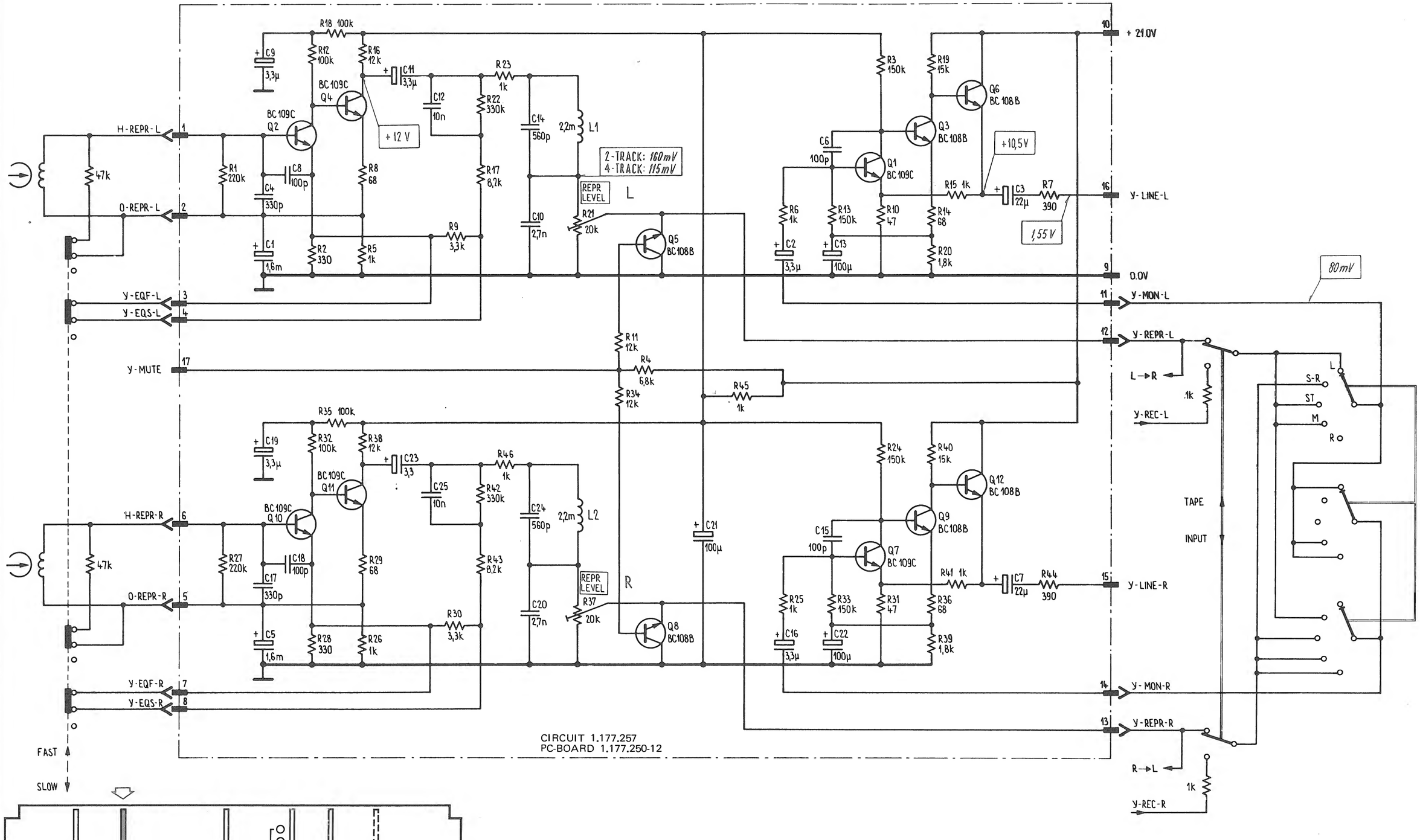
IND	DATE	NAME
	30.8.78	Weibel/gv

STUDER	Record Amplifier 1 7/8-3 3/4"	1.177.237	PAGE 1 of 2

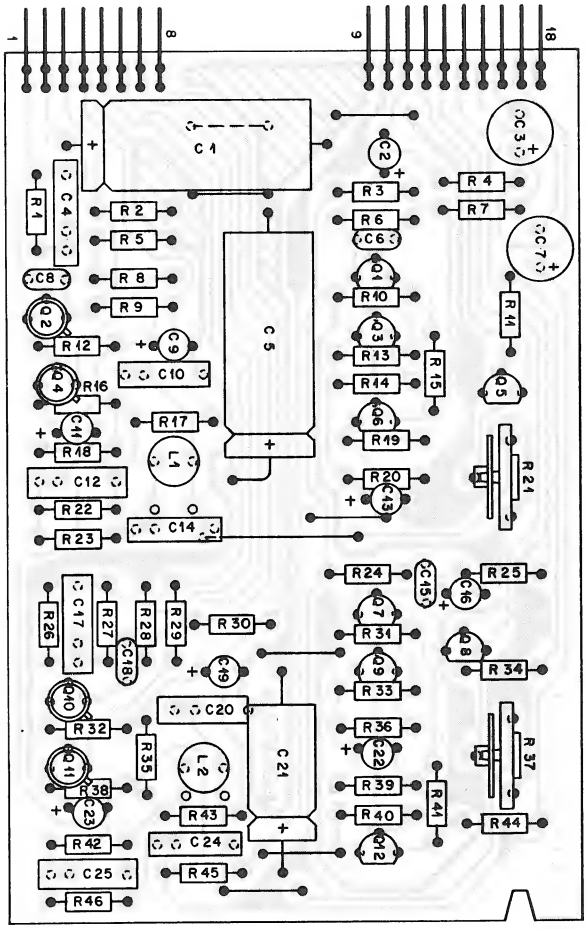
POS NO	PART NO	VALUE	SPECIFICATIONS			EQUIVALENT MFR
Q 08	50.03.0436	BC107B			NPN	any
R 01	57.11.4103	10 k	5%	.25W	CF	
R 02	57.11.4103	10 k				
R 03	57.11.4123	12 k				
R 04	57.11.4123	12 k				
R 05	57.11.4821	820				
R 06	57.11.4222	2,2 k				
R 07	58.02.4223	22 k	10%	.1 W	PCF	
R 08	57.11.4473	47 k	5%	.25W	CF	
R 09	57.11.4104	100 k				
R 10	57.11.4154	150 k				
R 11	57.11.4563	56 k				
R 12	58.02.4223	22 k	10%	.1 W	PCF	
R 13	58.02.4223	22 k				
R 14	57.11.4102	1 k	5%	.25W	CF	
R 15	57.11.4682	6,8 k				
R 16	57.11.4681	680				
R 17	57.11.4224	220 k				
R 18	57.11.4331	330				
R 19	57.11.4102	1 k				
R 20	57.11.4224	220 k				
R 21	57.11.4104	100 k				
R 22	58.02.4223	22 k	10%	.1 W	PCF	
R 23	57.11.4473	47 k	5%	.25W	CF	
R 24	57.11.4821	820				
R 25	57.11.4104	100 k				
R 26	57.11.4222	2,2 k				
R 27	58.02.4223	22 k	10%	.1 W	PCF	
R 28	58.02.4223	22 k				
R 29	57.11.4154	150 k	5%	.25W	CF	
R 30	57.11.4102	1 k				
R 31	57.11.4682	6,8 k				
R 32	57.11.4563	56 k				
R 33	57.11.4681	680				
R 34	57.11.4224	220 k				
R 35	57.11.4102	1 k				
R 36	57.11.4331	330				
R 37	57.11.4224	220 k				
R 38	57.11.4104	100 k				

CF = Carbon Film
PCF = Pot'met.Carbon Film

④ ③ ② ① ○	30.8.78	Weibel/gv
IND	DATE	NAME



STUDER REVOX	B77 LS
REPRODUCE AMPLIFIER NAB 1 7/8–3 3/4"	
1.177.257	ED1 09.79


1
8
9
18
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
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C17
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C23
C24
C25
L1
L2
R1
R2
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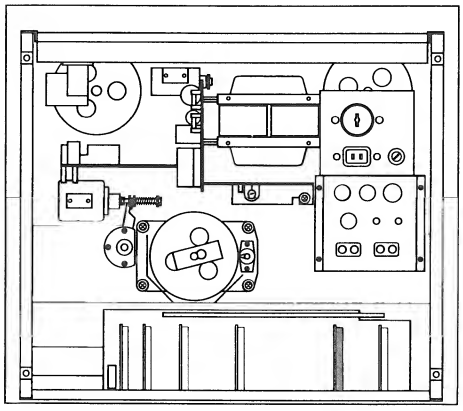
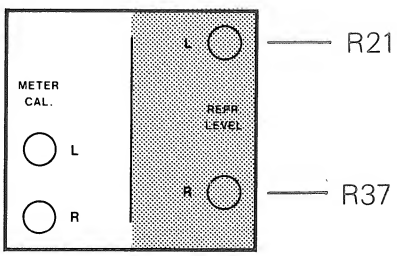
Q12




L
R
METER
CAL.
L
R
REAR
LEVEL
R21
R37

POS NO	PART NO	VALUE	SPECIFICATIONS			EQUIVALENT	MFR
C 01	59.25.0162	1600 U	10%	3V	EL		
C 02	59.30.6339	3,3 U	20%	35V	TA		
C 03	59.22.6220	22 U	10%	40V	EL		
C 04	59.11.6221	220 P	5%	400V	PC		
C 05	59.25.0162	1600 U	10%	3V	EL		
C 06	59.32.0101	100 P	20%	500V	CER		
C 07	59.22.6220	22 U	10%	40V	EL		
C 08	59.32.0101	100 P	20%	500V	CER		
C 09	59.30.6339	3,3 U	20%	35V	TA		
C 10	59.99.0259	2700 P	10%	50V	PETP		
C 11	59.30.6339	3,3 U	20%	35V	TA		
C 12	59.11.3103	0,01 U	5%	160V	PC		
C 13	59.30.1101	100 U	20%	3V	TA		
C 14	59.11.6561	560 P	5%	400V	PC		
C 15	59.32.0101	100 P	20%	500V	CER		
C 16	59.30.6339	3,3 U	20%	35V	TA		
C 17	59.11.6221	220 P	5%	400V	PC		
C 18	59.32.0101	100 P	20%	500V	CER		
C 19	59.30.6339	3,3 U	20%	35V	TA		
C 20	59.99.0259	2700 P	10%	400V	PETP		
C 21	59.25.4101	100 U	10%	25V	EL		
C 22	59.30.1101	100 U	20%	3V	TA		
C 23	59.30.6339	3,3 U	20%	35V	TA		
C 24	59.11.6561	560 P	5%	400V	PC		
C 25	59.11.3101	0,01 U	5%	160V	PC		
L 01	62.02.1222	2,2 mH	5%				
L 02	62.02.1222	2,2 mH	5%				
P 01	54.01.0270	8-Pole	Pin-Strip		AMP		
P 02	54.01.0271	10-Pole	Pin-Strip		AMP		
Q 01	50.03.0439	BC109C			NPN		any
Q 02	50.03.0407	BC109C	TO18		NPN		
Q 03	50.03.0436	BC107B			NPN		
Q 04	50.03.0407	BC109C	TO18		NPN		
Q 05	50.03.0436	BC107B			NPN		
Q 06	50.03.0436	BC107B			NPN		
Q 07	50.03.0439	BC109C			NPN		
Q 08	50.03.0436	BC107B			NPN		
Q 09	50.03.0436	BC107B			NPN		
Q 10	50.03.0407	BC109C	TO18		NPN		
Q 11	50.03.0407	BC109C	TO18		NPN		
Q 12	50.03.0436	BC107B			NPN		any

PC = Polycarbonate
PETP= Polyester
TA = Tantalum
EL = Electrolytyc

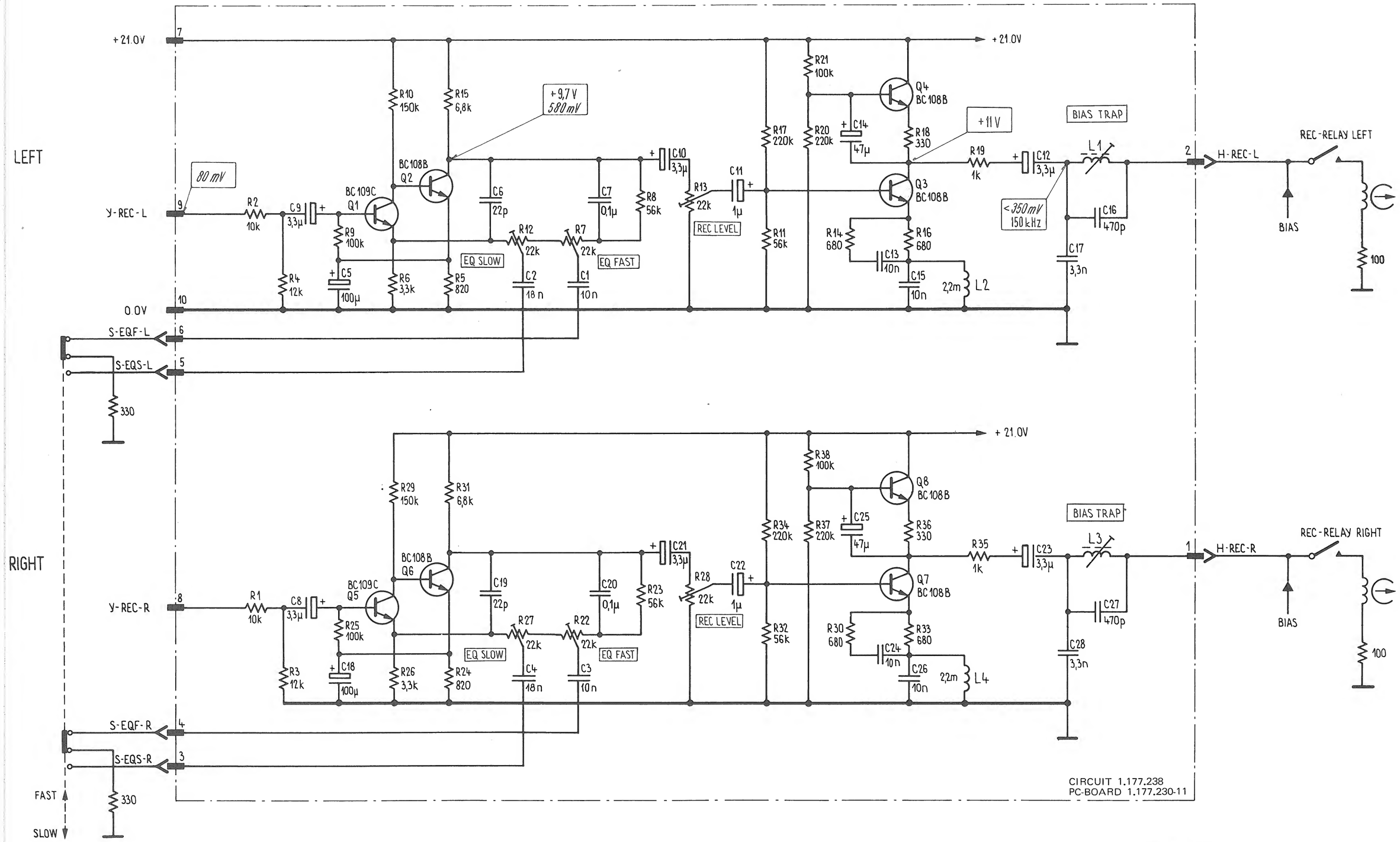
IND	DATE	NAME
④ ③ ② ① ○	30.8.78	Weibel/gv

STUDER | Reproduce-Amplifier 1 7/8-3 3/4" 1.177.257 | PAGE 1 of 2

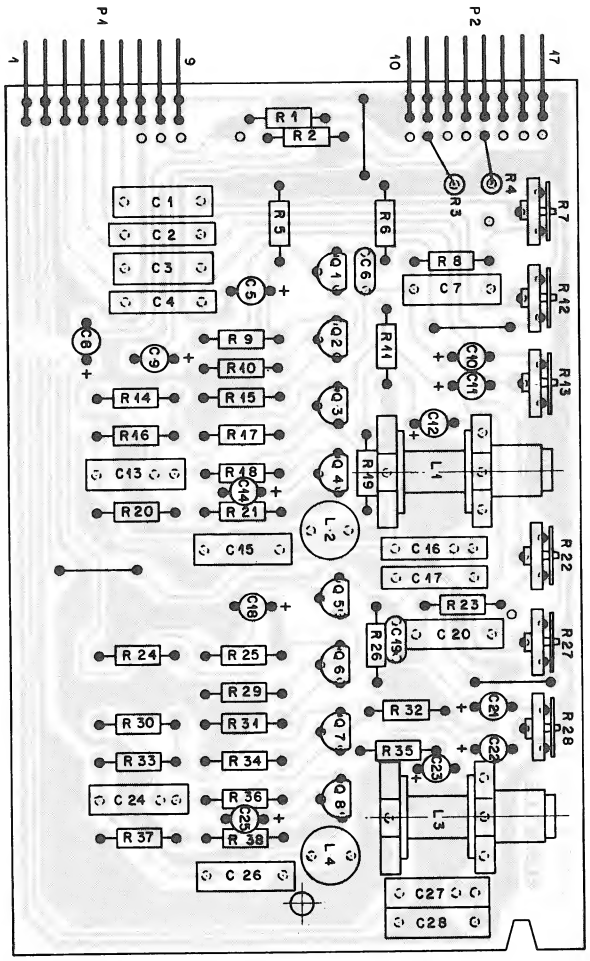
POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT MFR
R 01	57.11.4224	220 k	5% .25W CF	
R 02	57.11.4331	330		
R 03	57.11.4154	150 k		
R 04	57.11.4682	6,8 k		
R 05	57.11.4102	1 k		
R 06	57.11.4102	1 k		
R 07	57.11.4391	390		
R 08	57.11.4680	68		
R 09	57.11.4332	3,3 k		
R 10	57.11.4470	47		
R 11	57.11.4123	12 k		
R 12	57.11.4104	100 k		
R 13	57.11.4154	150 k		
R 14	57.11.4680	68		
R 15	57.11.4102	1 k		
R 16	57.11.4123	12 k		
R 17	57.11.4822	8,2 k		
R 18	57.11.4104	100 k		
R 19	57.11.4153	15 k		
R 20	57.11.4182	1,8 k		
R 21	58.19.0203	20 k	20% .15W PCF lin.	
R 22	57.11.4334	330 k	5% .25W CF	
R 23	57.11.4102	1 k		
R 24	57.11.4154	150 k		
R 25	57.11.4102	1 k		
R 26	57.11.4102	1 k		
R 27	57.11.4224	220 k		
R 28	57.11.4331	330		
R 29	57.11.4680	68		
R 30	57.11.4332	3,3 k		
R 31	57.11.4470	47		
R 32	57.11.4104	100 k		
R 33	57.11.4154	150 k		
R 34	57.11.4123	12 k		
R 35	57.11.4104	100 k		
R 36	57.11.4680	68		
R 37	58.19.0203	20 k	20% .15W PCF lin.	
R 38	57.11.4123	12 k	5% .25W CF	
R 39	57.11.4182	1,8 k		
R 40	57.11.4153	15 k		
R 41	57.11.4102	1 k		
R 42	57.11.4334	330 k		
R 43	57.11.4822	8,2 k		
R 44	57.11.4391	390		
R 45	57.11.4102	1 k		
R 46	57.11.4102	1 k		

CF = Carbon Film
PCF = Pot'meter Carbon Film

IND	DATE	NAME
④ ③ ② ① ○	30.8.78	Weibel/gv



STUDER REVOX	B77 SLS
RECORD AMPLIFIER NAB 15/16–1 7/8"	
1.177.238	ED1 09.79


P1
P2
1
9
10
17
R1
R2
R3
R4
R5
R6
R7
R8
R9
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R11
R12
R13
R14
R15
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C17
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C21
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C23
C24
C25
C26
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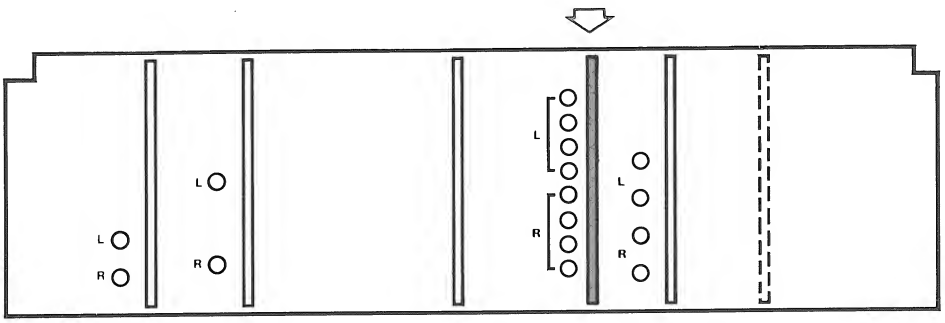
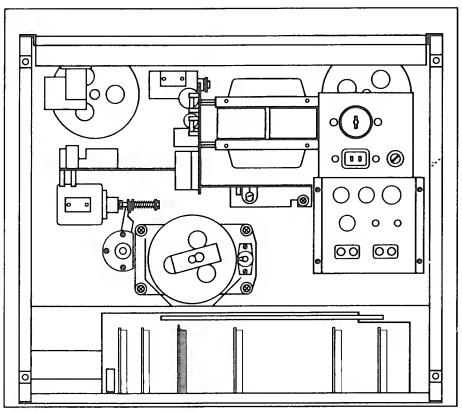
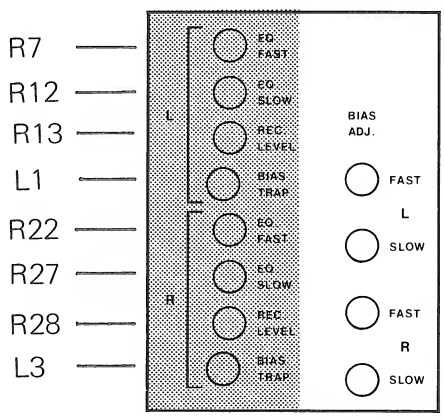
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
L1
L2
L3
L4


L
R
L
R
L
R
L
R




R7
R12
R13
L1
R22
R27
R28
L3
L
R
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
BIAS ADJ.
FAST
L
SLOW
FAST
R
SLOW

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	C 01	59.11.4103	0,01 U	2,5% 160V PC	
	C 02	59.12.4183	0,018U	5% 250V MPETP	
	C 03	59.11.4103	0,01 U	2,5% 160V PC	
	C 04	59.12.4183	0,018U	5% 250V MPETP	
	C 05	59.22.3101	100 U	10% 12V EL	
	C 06	59.32.0220	22 P	20% 500V CER	
	C 07	59.31.6104	0,1 U	10% 100V MPETP	
	C 08	59.30.6339	3,3 U	20% 35V TA	
	C 09	59.30.6339	3,3 U	20% 35V TA	
	C 10	59.30.6339	3,3 U	20% 35V TA	
	C 11	59.30.6109	1 U	20% 35V TA	
	C 12	59.30.6339	3,3 U	20% 35V TA	
	C 13	59.11.4103	0,01 U	2,5% 160V PC	
	C 14	59.30.1470	47 U	20% 3V TA	
	C 15	59.31.9103	0,01 U	10% 100V PETP	
	C 16	59.11.6471	470 P	5% 400V PC	
	C 17	59.11.6332	3300 P	5% 400V PC	
	C 18	59.22.3101	100 U	10% 12V EL	
	C 19	59.32.0220	22 P	20% 500V CER	
	C 20	59.31.6104	0,1 U	10% 100V MPETP	
	C 21	59.30.6339	3,3 U	20% 35V TA	
	C 22	59.30.6109	1 U	20% 35V TA	
	C 23	59.30.6339	3,3 U	20% 35V TA	
	C 24	59.11.4103	0,01 U	2,5% 160V PC	
	C 25	59.30.1470	47 U	20% 3V TA	
	C 26	59.31.9103	0,01 U	10% 100V PETP	
	C 27	59.11.6471	470 P	5% 400V PC	
	C 28	59.11.6332	3300 P	5% 400V PC	

IND	DATE	NAME
④		
③		
②		
①		
○	15.2.1979	R.W/gv

PC = Polycarbonate MPETP = Met.Polyester
TA = Tantalum
EL = Electrolytic
CER = Ceramic
PETP= Polyester

STUDER	Record Amplifier 15/16-1 7/8"	1.177.238	PAGE 1 OF 3

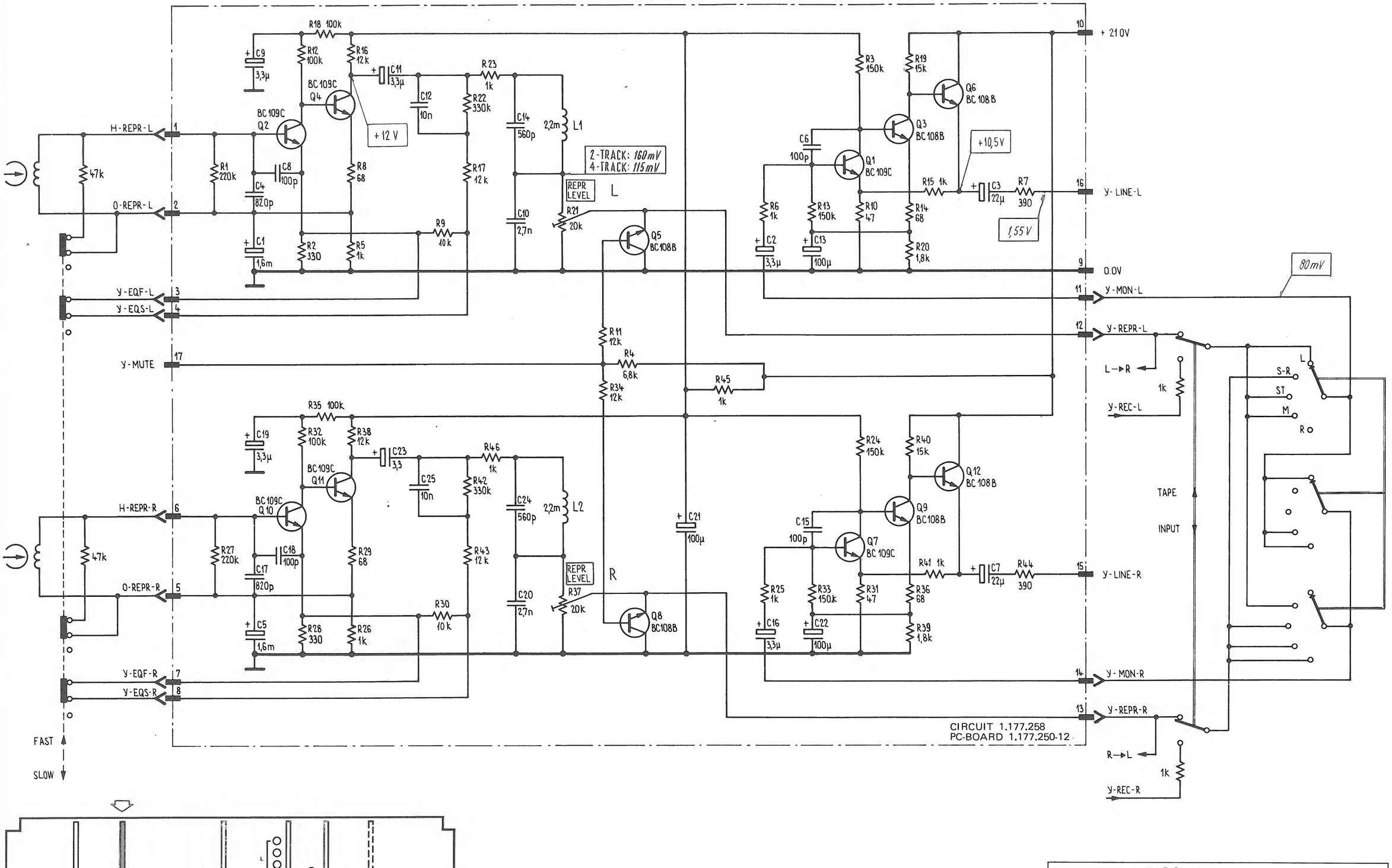
IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	L 01	1.177.231.00			S
	L 02	62.02.1222	2.2 mH	5%	
	L 03	1.177.231.00			S
	L 04	62.02.1222	2.2 mH	5%	
	P 01	54.01.0220	9-Pole	Pin-Strip AMP	
	P 02	54.01.0270	8-Pole	Pin-Strip AMP	
	Q 01	50.03.0439	BC239C	NPN	any
	Q 02	50.03.0436	BC107B	NPN	
	Q 03	50.03.0436	BC107B	NPN	
	Q 04	50.03.0436	BC107B	NPN	
	Q 05	50.03.0439	BC239C	NPN	
	Q 06	50.03.0436	BC107B	NPN	
	Q 07	50.03.0436	BC107B	NPN	
	Q 08	50.03.0436	BC107B	NPN	
	R 01	57.11.4103	10 k	5% .25W CF	
	R 02	57.11.4103	10 k		
	R 03	57.11.4123	12 K		
	R 04	57.11.4123	12 k		
	R 05	57.41.4821	820		
	R 06	57.41.4332	3,3 k		
	R 07	58.02.4223	22 k	10% .1 W CF	
	R 08	57.41.4563	56 k	5% .25W CF	
	R 09	57.41.4104	100 k		
	R 10	57.41.4154	150 k		
	R 11	57.41.4563	56 k		
	R 12	58.02.4223	22 k	10% .1 W CF	
	R 13	58.02.4223	22 k		

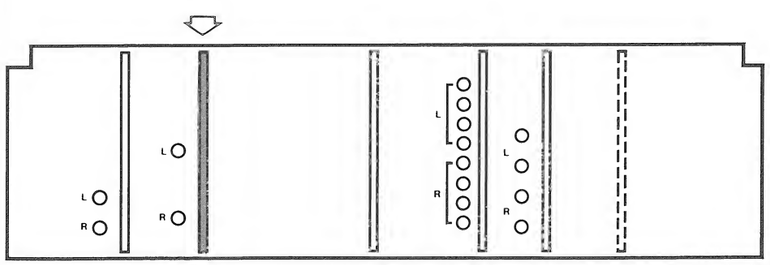
IND	DATE	NAME	
④			CF = Carbon-Film S = Studer
③			
②			
①			
○	15.2.1979	R.W /gv	

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	R 14	57.41.4681	680	5% .25W CF	
	R 15	57.41.4682	6,8 k		
	R 16	57.41.4681	680		
	R 17	57.41.4224	220 k		
	R 18	57.41.4331	330		
	R 19	57.41.4102	1 k		
	R 20	57.41.4224	220 k		
	R 21	57.41.4104	100 k		
	R 22	58.02.4223	22 k	10% .1 W CF	
	R 23	57.41.4563	56 k	5% .25W CF	
	R 24	57.41.4821	820		
	R 25	57.41.4104	100 k		
	R 26	57.41.4332	3,3 k		
	R 27	58.02.4223	22 k	10% .1 W CF	
	R 28	58.02.4223	22 k		
	R 29	57.41.4154	150 k	5% .25W CF	
	R 30	57.41.4681	680		
	R 31	57.41.4682	6,8 k		
	R 32	57.41.4563	56 k		
	R 33	57.41.4681	680		
	R 34	57.41.4224	220 k		
	R 35	57.41.4102	1 k		
	R 36	57.41.4331	330		
	R 37	57.41.4224	220 k		
	R 38	57.41.4104	100 k		

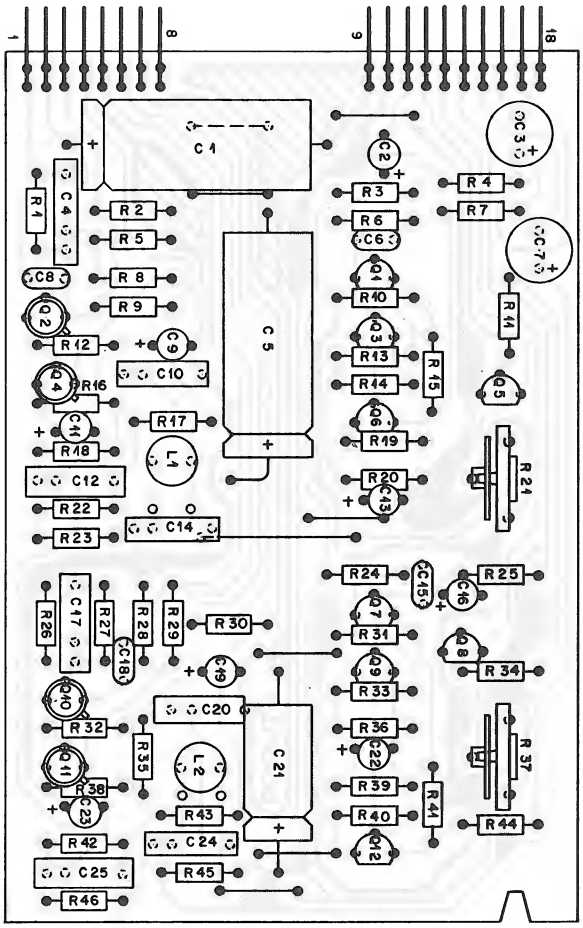
IND	DATE	NAME
④		
③		
②		
①		
◯	15.2.1979	R.W/gv

CF = Carbon-Film





STUDER REVOX	B77 SLS
REPRODUCE AMPLIFIER NAB 15/16–1 7/8"	
1.177.258	ED1 09.79


1
8
9
18
C1
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C5
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C7
C8
C9
C10
C11
C12
C13
C14
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C17
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C21
C22
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C25
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R44
R45
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Q11
Q12
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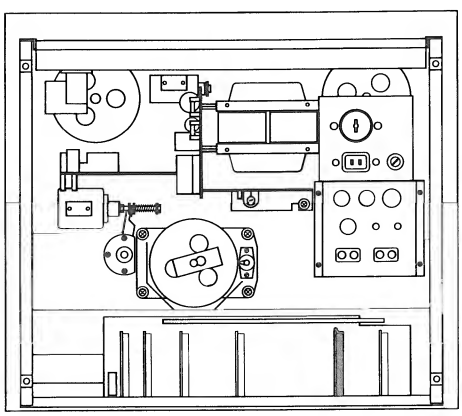
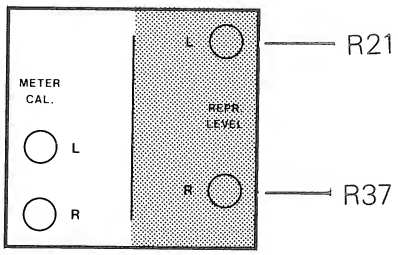
L2




METER
CAL.
L
R
L
REPR
LEVEL
R
R21
R37

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT			MFR
	C 01	59.25.0162	1600 U	10%	3V	EL	
	C 02	59.30.6339	3,3 U	20%	35V	TA	
	C 03	59.22.6220	22 U	10%	40V	EL	
	C 04	59.11.6821	820 P	5%	400V	PC	
	C 05	59.25.0162	1600 U	10%	3V	EL	
	C 06	59.32.0101	100 P	20%	500V	CER	
	C 07	59.22.6220	22 U	10%	40V	EL	
	C 08	59.32.0101	100 P	20%	500V	CER	
	C 09	59.30.6339	3,3 U	20%	35V	TA	
	C 10	59.99.0259	2700 P	10%	50V	PETP	
	C 11	59.30.6339	3,3 U	20%	35V	TA	
	C 12	59.11.3103	0,01 U	5%	160V	PC	
	C 13	59.30.1101	100 U	20%	3V	TA	
	C 14	59.11.6561	560 P	5%	400V	PC	
	C 15	59.32.0101	100 P	20%	500V	CER	
	C 16	59.30.6339	3,3 U	20%	35V	TA	
	C 17	59.11.6821	820 P	5%	400V	PC	
	C 18	59.32.0101	100 P	20%	500V	CER	
	C 19	59.30.6339	3,3 U	20%	35V	TA	
	C 20	59.99.0259	2700 P	10%	400V	PETP	
	C 21	59.25.4101	100 U	10%	25V	EL	
	C 22	59.30.1101	100 U	20%	3V	TA	
	C 23	59.30.6339	3,3 U	20%	35V	TA	
	C 24	59.11.6561	560 P	5%	400V	PC	
	C 25	59.11.3101	0,01 U	5%	160V	PC	
	L 01	62.02.1222	2.2 mH	5%			
	L 02	62.02.1222	2.2 mH	5%			
	P 01	54.01.0270	8-Pole	Pin-Strip		AMP	

IND	DATE	NAME
④		
③		
②		
①		
○	15.2.79	R.W/gv

EL = Electrolytic
PC = Polycarbonate
PETP= Polyester
CER = Ceramic

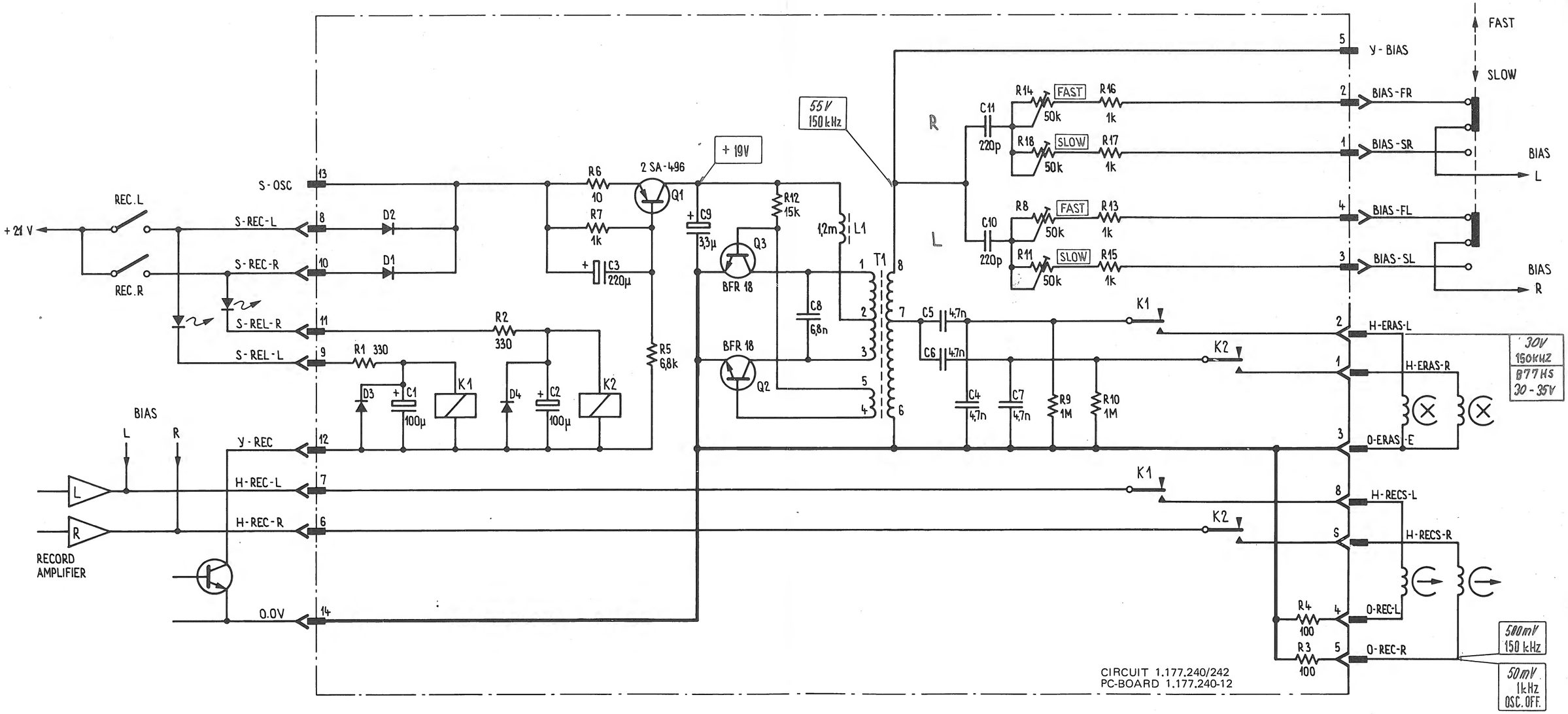
STUDER	Reproduce-Amplifier 15/16-1 7/8"	1.177.258	PAGE 1 OF 3

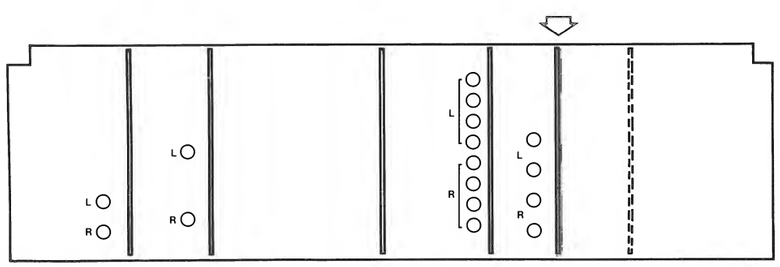
IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	P 02	54.01.0271	10-Pole	Pin-Strip AMP	
	Q 01	50.03.0439	BC239C	NPN	any
	Q 02	50.03.0407	BC109C	TO18 NPN	
	Q 03	50.03.0436	BC107B	NPN	
	Q 04	50.03.0407	BC109C	TO18 NPN	
	Q 05	50.03.0436	BC107B	NPN	
	Q 06	50.03.0436	BC107B	NPN	
	Q 07	50.03.0439	BC239C	NPN	
	Q 08	50.03.0436	BC107B	NPN	
	Q 09	50.03.0436	BC107B	NPN	
	Q 10	50.03.0407	BC109C	TO18 NPN	
	Q 11	50.03.0407	BC109C	TO18 NPN	
	Q 12	50.03.0436	BC107B	NPN	
	R 01	57.41.4224	220 k	5% .25W CF	
	R 02	57.41.4331	330		
	R 03	57.41.4154	150 k		
	R 04	57.41.4682	6,8 k		
	R 05	57.41.4102	1 k		
	R 06	57.41.4102	1 k		
	R 07	57.41.4391	390		
	R 08	57.41.4680	68		
	R 09	57.41.4103	10 k		
	R 10	57.41.4470	47		
	R 11	57.41.4123	12 k		
	R 12	57.41.4104	100 k		
	R 13	57.41.4154	150 k		
	R 14	57.41.4680	68		
	R 15	57.41.4102	1 k		
	R 16	57.11.4123	12 k	5% .25W CF	

IND	DATE	NAME	
④			CF = Carbon Film
③			
②			
①			
○	15.2.1979	R.W /gv	

IND	POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
	R 17	57.41.4123	12 k		
	R 18	57.41.4104	100 k		
	R 19	57.41.4153	15 k		
	R 20	57.41.4182	1,8 k		
	R 21	58.19.0203	20 k	20% .15W lin.PCF	
	R 22	57.41.4334	330 k	5% .25W CF	
	R 23	57.41.4102	1 k		
	R 24	57.41.4154	150 k		
	R 25	57.41.4102	1 k		
	R 26	57.41.4102	1 k		
	R 27	57.41.4224	220 k		
	R 28	57.41.4331	330		
	R 29	57.41.4680	68		
	R 30	57.41.4103	10 k		
	R 31	57.41.4470	47		
	R 32	57.11.4104	100 k		
	R 33	57.41.4154	150 k		
	R 34	57.41.4123	12 k		
	R 35	57.41.4104	100 k		
	R 36	57.41.4680	68		
	R 37	58.19.0203	20 k	20% .15W lin.PCF	
	R 38	57.11.4123	12 k	5% .25W CF	
	R 39	57.41.4182	1,8 k		
	R 40	57.41.4153	15 k		
	R 41	57.41.4102	1 k		
	R 42	57.41.4334	330 k		
	R 43	57.41.4123	12 k		
	R 44	57.41.4391	390		
	R 45	57.41.4102	1 k		
	R 46	57.41.4102	1 k	5% .25W CF	

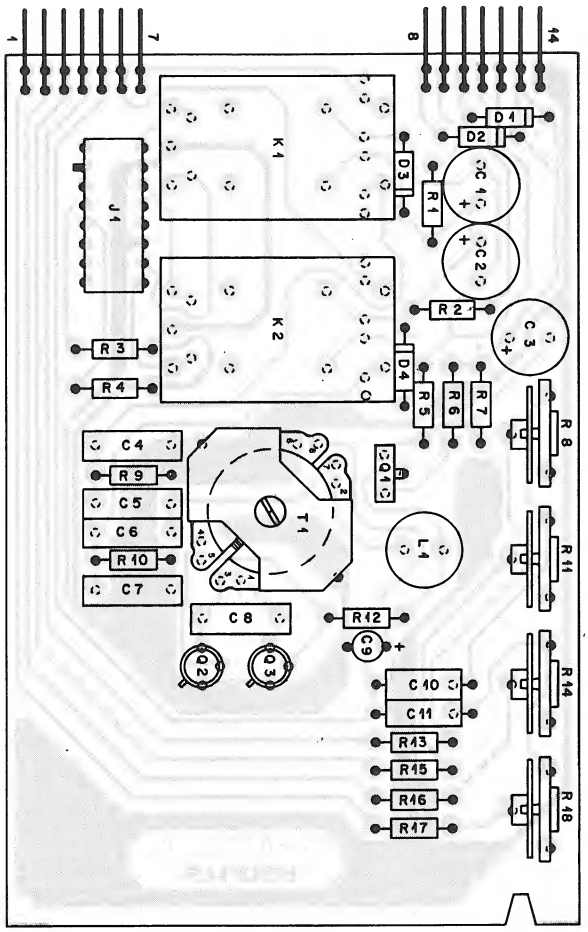
IND	DATE	NAME
④		
③		
②		
①		
○	15.2.1979	R.W /gv

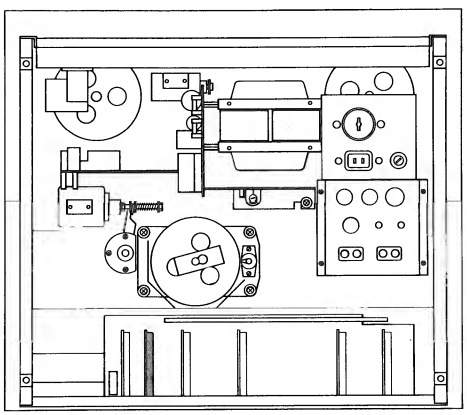




1.177.242 VALID FOR B77 HS
(T1 FOR MORE ERASE CURRENT/ORDER NO. 1.022.192.00)

STUDER REVOX	B77
OSZILLATOR	
1.177.240 / 242	ED2 09.79


1
7
8
14
K1
K2
J1
D1
D2
D3
D4
C1
C2
C3
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
C4
C5
C6
C7
C8
C9
C10
C11
T1
L1
Q1
Q2
Q3


L
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
R
EQ. FAST
EQ. SLOW
REC. LEVEL
BIAS TRAP
BIAS ADJ.
FAST
L
SLOW
FAST
R
SLOW
R8
R11
R14
R18

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
C 01	59.22.4101	100 U	10% 16 V EL		
C 02	59.22.4101	100 U	10% 16 V EL		
C 03	59.22.2221	220 U	10% 6,3V EL		
C 04	59.11.4472	4700P	2,5% 160V PC		
C 05	59.11.4472	4700P	2,5% 160V PC		
C 06	59.11.4472	4700P	2,5% 160V PC		
C 07	59.11.4472	4700P	2,5% 160V PC		
C 08	59.11.3682	6800P	5% 160V PC		
C 09	59.30.6339	3,3 U	20% 35 V TA		
C 10	59.04.8221	220 P	5% 160V PS		
C 11	59.04.8221	220 P	5% 160V PS		
D 01	50.04.0109	1 N 4448			any
D 02	50.04.0109	1 N 4448			any
D 03	50.04.0109	1 N 4448			any
D 04	50.04.0109	1 N 4448			any
J 01	54.01.0306	8 - Pole	Socket-Strip AMP		
K 01	56.04.0140	2 x U	500 Ω 12V		N,O
K 02	56.04.0140	2 x U	500 Ω 12V		N,O
L 01	62.02.2122	1,2 mH	5% R_{DC} max. 6Ω		
P 01	54.01.0223	7 -Pole	Pin-Strip AMP		
P 02	54.01.0223	7 -Pole	Pin-Strip AMP		
Q 01	50.03.0479	BD 14o	Medium Power PNP		
Q 02	50.03.0434	BFR 18	NPN		
Q 03	50.03.0434	BFR 18	NPN		
R 01	57.41.4331	330	5% .25W CF		
R 02	57.41.4331	330			
R 03	57.41.4101	100			
R 04	57.41.4101	100			
R 05	57.41.4682	6,8 k			
R 06	57.41.4100	10			
R 07	57.41.4102	1 k			
R 08	58.19.0503	50 k	20% .15W PCF		

PC = Polycarbonate
PS = Polystyrene
CF = Carbon Film
PCF= Pot.Carbon Film

N = National
O = Omron

IND	DATE	NAME
④		
③		
②		
①		
○	6.4.77	Wartburg/gv

STUDER	Oscillator	1.177.240	PAGE 1 of 2

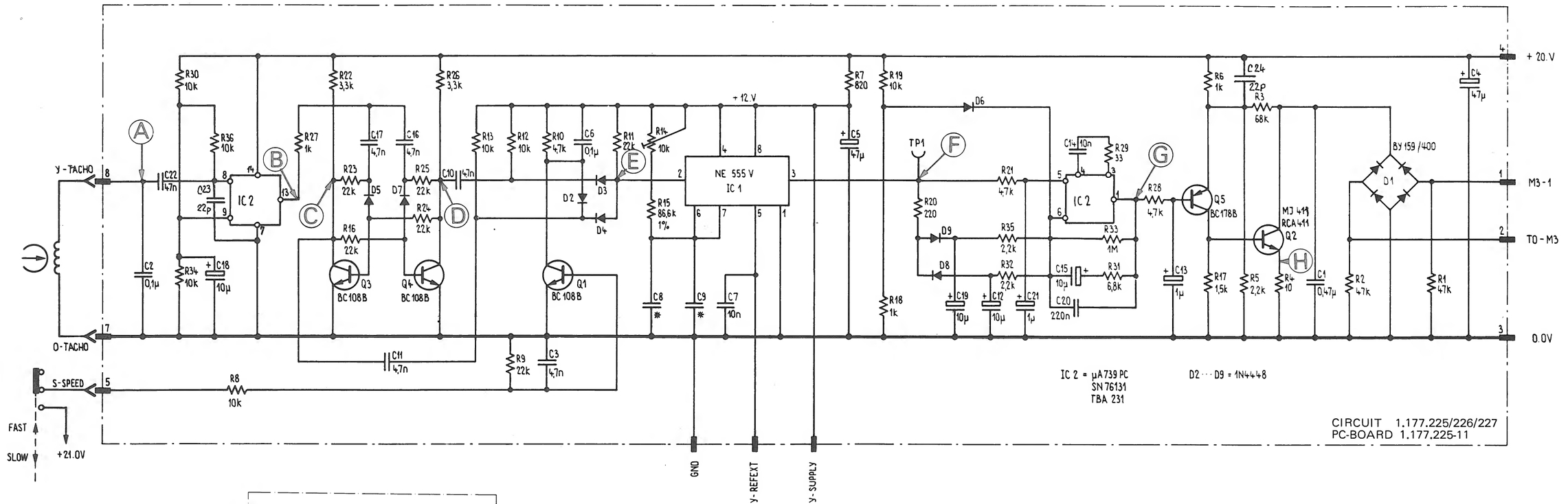
POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
R 09	57.41.4105	1 M	5% .25W CF		
R 10	57.41.4105	1 M	5% .25W CF		
R 11	58.19.0503	50 k	20% .15W PCF		
R 12	57.41.4153	15 k	5% .25W CF		
R 13	57.41.4102	1 k	5% .25W CF		
R 14	58.19.0503	50 k	20% .15W PCF		
R 15	57.41.4102	1 k	5% .25W CF		
R 16	57.41.4102	1 k	5% .25W CF		
R 17	57.41.4102	1 k	5% .25W CF		
R 18	58.19.0503	50 k	20% .15W PCF		
T 01	1.022.181.00		Oscillator Coil		S
	1.022.192.00	valid only for	Board 1.177.242 B77 HS		

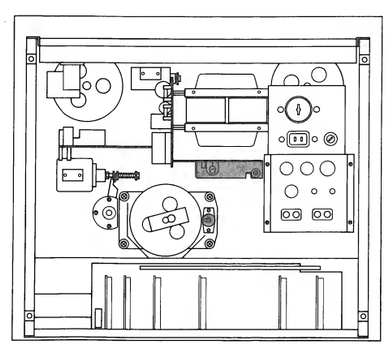
CF = Carbon Film
PCF= Pot.Carbon Film
S = Studer

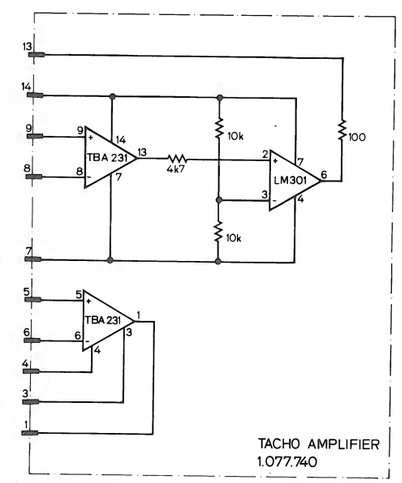
IND	DATE	NAME
④		
③		
②		
①		
○	6.4.77	Wartburg

STUDER	Oscillator	1.177.240	PAGE 2 of 2

	A	B	C	D	E	F	G	H
SLOW	2.T, 100..140 mVpp	20 Vpp	20 Vpp	20 Vpp	80-150µs, 12Vpp	12Vpp	U, 10..13V, 2.T	1.5..2V, 10 ms
FAST	T				0.7..1V			10 ms





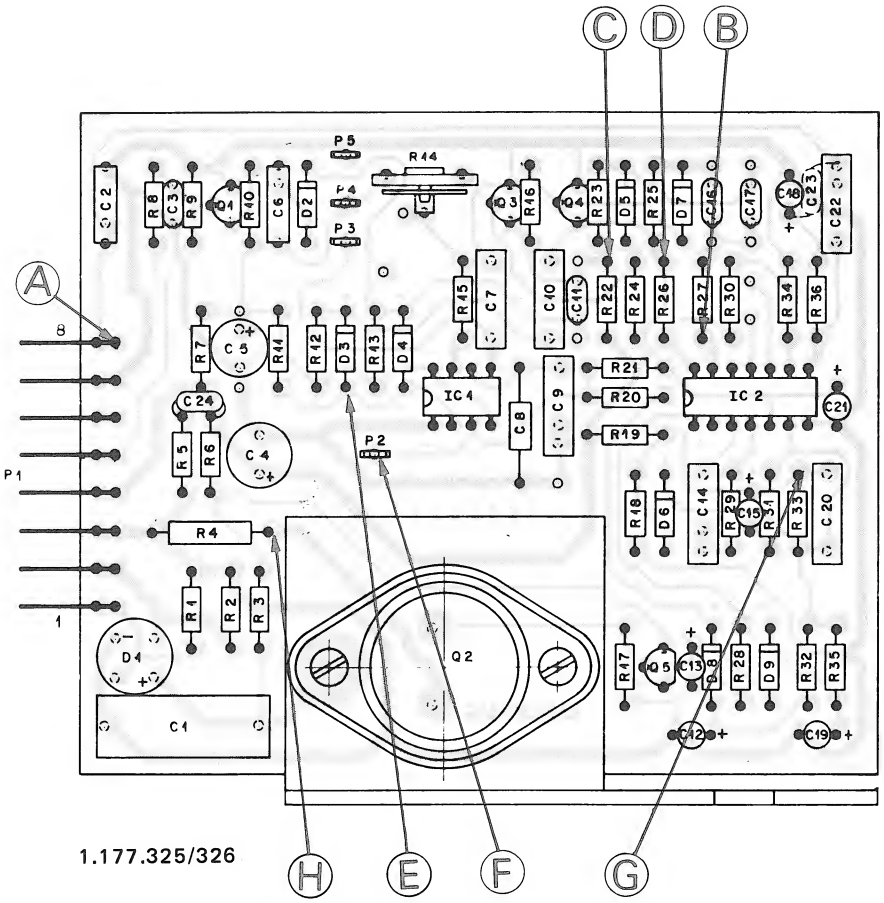


PIN CONFIGURATION:
14-PIN DUAL-IN-LINE

VERSION 1.177.327: INSTEAD OF THE REMOVED IC2 THE SUBPRINT TACHO AMPLIFIER 1.077.740 IS PLUGGED INTO THE IC2 SOCKET.

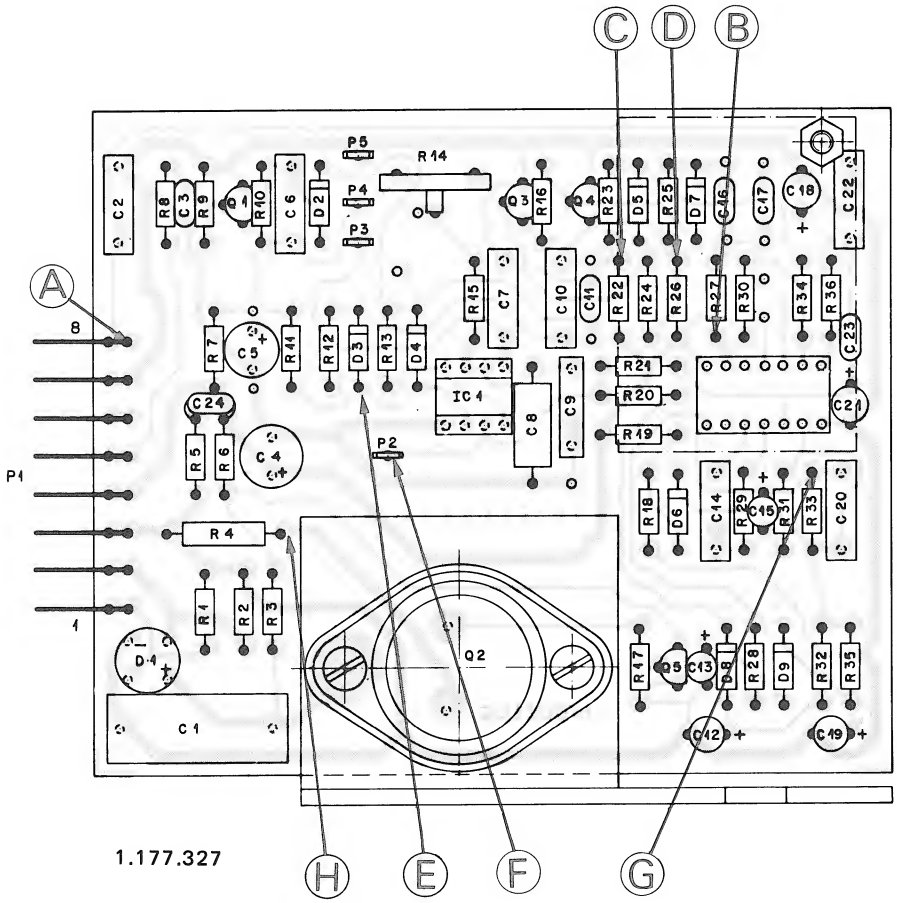
TYPE	SPEED	CAPSTAN SHAFT ø	C-MOTOR NO.	SPEED CONTROL	C8	C9
HS	7 1/2"–15"	9.06 mm	1.021.320	1.177.325	1.6 nF	4.7 nF
STD	3 3/4"–7 1/2"	4.51 mm	1.021.300	1.177.325	1.6 nF	4.7 nF
LS	1 7/8"–3 3/4"	3.00 mm	1.021.304	1.177.326	1.6 nF	6.8 nF
SLS	15/16"–1 7/8"	3.00 mm	1.021.304	1.177.327	5.6 nF	10 nF

STUDER REVOX	B77
SPEED CONTROL	
1.177.325/326/327	ED2 09.79

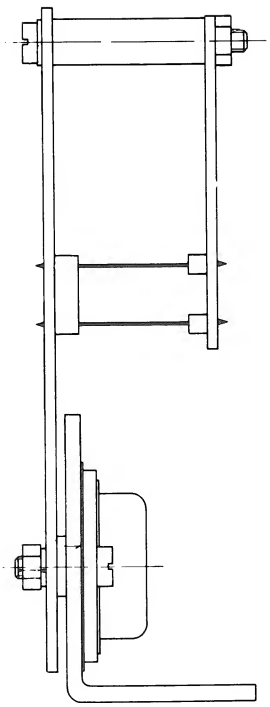


1.177.325/326

SPEED CONTROL	T	U
1.177.325	625 µs	1 Vpp
1.177.326	833 µs	2.5 Vpp
1.177.327	1666 µs	3 Vpp



1.177.327



POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT	MFR
C 01	59.99.0450	0,47 U	±10% 150V	MP	
C 02	59.31.4104	0,1 U	5% 250V	MPETP	
C 03	59.32.3472	4700 P	-20% 40V	CER	
C 04	59.22.5470	47 U	10% 25V	EL	
C 05	59.22.5470	47 U	10% 25V	EL	
C 06	59.31.4104	0,1 U	5% 250V	MPETP	
C 07	59.31.4103	0,01 U	20% 160V	PETP	
C 08	59.12.8162	1600 P	1% 125V	PS	
C 09	59.11.4472	4700 P	2,5% 160V	PC	
C 10	59.31.4472	4700 P	20% 160V	PETP	
C 11	59.32.3472	4700 P	-20% 40V	CER	
C 12	59.30.4100	10 U	-20% 16V	TA	
C 13	59.30.6109	1 U	-20% 35V	TA	
C 14	59.31.4103	0,01 U	20% 160V	PETP	
C 15	59.30.4100	10 U	20% 16V	TA	
C 16	59.32.3472	4700 P	-20% 40V	CER	
C 17	59.32.3472	4700 P	-20% 40V	CER	
C 18	59.30.4100	10 U	20% 16V	TA	
C 19	59.30.4100	10 U	20% 16V	TA	
C 20	59.31.1224	0,22 U	20% 100V	MPETP	
C 21	59.30.6109	1 U	20% 35V	TA	
C 22	59.31.4473	0,047U	20% 250V	MPETP	
C 23	59.32.0220	22 pF	±20% 400 V	CER	
C 24	59.32.0220	22 pF	±20% 400 V	CER	
D 01	70.01.0223	B 250 C800			
D 02	50.04.0109	1 N 4448			any
D 03	50.04.0109	1 N 4448			any
D 04	50.04.0109	1 N 4448			any
D 05	50.04.0109	1 N 4448			any
D 06	50.04.0109	1 N 4448			any
D 07	50.04.0109	1 N 4448			any
D 08	50.04.0109	1 N 4448			any
D 09	50.04.0109	1 N 4448			any
IC 01	50.05.0158	NE 555	Timer	MC1455P	S,M
IC 02	50.05.0237	TBA 231	µA 739 equiv.	SN76131N	F,A,T
P 01	54.01.0582	8 - Pole	Pin Strip AMP		
P 2-5	54.02.0320	8 - Pole	AMP		
Q 01	50.03.0436	BC 107 B	NPN		
Q 02	50.03.0477	MJ 411	NPN Power	RCA 411	M,RCA
Q 03	50.03.0436	BC 107 B	NPN		
Q 04	50.03.0436	BC 107 B	NPN		
Q 05	50.03.0318	BC 178 B	PNP		

M = Motorola MP =metallized paper
S = Signetics PS =polystyrene
A = Ates CER=ceramic
T = Texas Instr. PETP = polyester
F = Fairchild MPETP= metallized polyester

IND	DATE	NAME
④ ③ ② ① ○	1.4.77	Wartburg/gv

STUDER	Capstan Speed Control	1.177.325	PAGE 1 of 2

POS NO	PART NO	VALUE	SPECIFICATIONS	EQUIVALENT MFR
R 01	57.41.4473	47 K	5% .25W CF	
R 02	57.41.4473	47 K	5% .25W CF	
R 03	57.41.4683	68 K	5% .25W CF	
R 04	57.42.4100	10	5% .33W CF	
R 05	57.41.4222	2,2 K	5% .25W CF	
R 06	57.41.4102	1 K		
R 07	57.41.4821	820		
R 08	57.41.4103	10 K		
R 09	57.41.4223	22 K		
R 10	57.41.4472	4,7 K		
R 11	57.41.4223	22 K		
R 12	57.41.4103	10 K		
R 13	57.41.4103	10 K		
R 14	58.99.0126	10 K	10% 500ppm/°C PCF	
R 15	57.99.0179	86,6K	1% 50ppm MF	
R 16	57.41.4223	22 K	5% .25W CF	
R 17	57.41.4152	1,5 K		
R 18	57.41.4102	1 K		
R 19	57.41.4103	10 K		
R 20	57.41.4221	220		
R 21	57.41.4472	4,7 K		
R 22	57.41.4332	3,3 K		
R 23	57.41.4223	22 K		
R 24	57.41.4223	22 K		
R 25	57.41.4223	22 K		
R 26	57.41.4332	3,3 K		
R 27	57.41.4472	4,7 K		
R 28	57.41.4472	4,7 K		
R 29	57.41.4330	33		
R 30	57.41.4103	10 K		
R 31	57.41.4682	6,8 K		
R 32	57.41.4222	2,2 K		
R 33	57.41.4105	1 M		
R 34	57.41.4103	10 K		
R 35	57.41.4222	2,2 K		
R 36	57.41.4103	10 K		

CF = Carbon Film
PCF= Pot.carbon Film
MF = Metal Film

IND	DATE	NAME
④ ③ ② ① ○	1.4.77	Wartburg/gu

Hersteller/Manufacturer/Fabricant
WILLI STUDER
CH-8105 Regensdorf, Switzerland
Althardstrasse 30

WILLI STUDER GmbH
D-7827 Löffingen, Germany
Talstrasse 7

Worldwide Distribution
REVOX ELA AG
CH-8105 Regensdorf, Switzerland
Althardstrasse 146

18.226.879